

MONDAY, OCTOBER 16, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON A CASE IN WHICH PAIN IN THE ABDOMEN WAS A PROMINENT SYMPTOM.

BY JAMES H. HUTCHINSON, M.D.,

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I INTEND this morning to call your attention to a case which illustrates the difficulty so often met with in the diagnosis of disease affecting the abdominal viscera. In this case pain is a very prominent symptom,—in fact, I might almost say has been at times the only indication that the patient was the subject of disease. Now, pain may attend almost any morbid process going on within the abdominal cavity, or, originating outside of it, may, as in caries of the vertebræ, be referred to it. It is, therefore, a symptom merely, and one which will render necessary the exercise of all the skill you possess in diagnosis to enable you to recognize the condition upon which it depends in any particular instance. The physical examination of the abdomen would seem to one inexperienced in clinical medicine easier than that of the chest, but practically it is found to be much more difficult, and you will consequently hear doubt as to the correct diagnosis more frequently expressed when the disease is situated below than when it is above the diaphragm.

The case before you, as I have said, illustrates the difficulty of diagnosis in abdominal disease. Although it has been under observation in the medical wards of this hospital for some months, I am unwilling to commit myself to a positive expression of opinion as to the nature of the lesion giving rise to the pain from which the patient has suffered for so long a time. I have brought the patient before you, however, because I have always found those cases in which the diagnosis is obscure to be the most interesting to the careful student of disease, and therefore the most instructive.

Without further prelude, I will read an abstract of the notes of the cases, for which I am indebted to the Resident Physician, Dr. James C. Wilson.

Louisa W., colored, æt. 21, single, a domestic, was admitted September 13, 1870. Her history is as follows: Her father died of typhoid fever, but her mother and all her brothers and sisters are still alive and in good health. Her previous health was good until about two years ago, when, late in the autumn, she had an attack of typhoid pneumonia, so called, accompanied by pain in her left chest, cough, rusty expectoration, fever, delirium, etc., and took quinia as a remedy. She was at this time a month in bed, and arose very thin and weak. Convalescence was slow, and it was not until the following spring that she was able to return to her work. She, however, finally regained her health and became fat and strong, and remained so until the early part of last winter, when, while acting as child's-nurse in one of the Southern States, she was attacked with neuralgic pains behind the left ear and in the occipital region, very acute, and paroxysmal in character. These lasted for about three months, and were succeeded by a cough, attended by slight mucous expectoration, but not by hæmoptysis or by pain in the chest. She had, however, at this time irregular febrile attacks about midday, followed by sweats towards and during the night. The cough was relieved at the end of three weeks, leaving behind it only a slight irritation of the air-passages. She began, however, to lose flesh and strength, her menses, which had, until her sickness, occurred regularly, ceased entirely, and she was troubled with severe pain in the epigastrium. This was paroxysmal

and very intense, appeared daily about noon, and lasted about an hour. During this time her appetite was poor, but there were no dyspeptic symptoms, such as vomiting or eructations. Her bowels were regularly moved; occasionally, too, she had attacks of pain in the back along the spine. This was most severe in the lumbo-sacral region, but was not aggravated during the paroxysms of pain in the epigastrium. There was no pain in the lower part of the abdomen, and micturition was not frequent or painful. A slight, inconstant, whitish vaginal discharge was complained of.

On admission, she was anæmic, emaciated, had almost constant elevation of temperature; her skin was dry and hard, her pulse quick and irritable, her tongue clean and glazed, her mind perfectly clear, and her special senses were unaffected. There were no signs of cardiac or pulmonary disease. When examined, the epigastric and right hypochondriac regions were found to be full, and an oval mass, with confused, obscure margins, and having a distinct impulse communicated to it, was felt occupying the epigastrium and extending slightly into the right hypochondrium. This mass was dull on percussion, was the seat of a non-expansile pulsation, and was not tender on pressure. The area of splenic dullness was not increased, nor was that of the right lobe of the liver. There was no tumor to be detected in any part of the abdomen.

On auscultation, a distinct musical systolic murmur was heard over the mass, changing its characters, however, from time to time. The pulsation of the femoral arteries was very distinct, and when pressure was made with the stethoscope upon them a distinct murmur could be heard. The urine was found on examination to be normal. She was ordered iodide of potassium and sulphate of quinia, together with a purgative. The purgative brought away a large quantity of solid feces, after which the epigastric tumor was observed to be smaller and the pulsation to be less marked.

November 9.—Very little improvement has taken place in the condition of the patient. There is at this time no tumor to be felt in the epigastrium, but the resistance of the recti muscles, which are very tense, is so great that it is impossible to make a very satisfactory examination. Her bowels act regularly, and her appetite has somewhat improved, but she is still harassed by pain in the epigastrium. There is no vomiting and no nausea. On palpation a pulsation is distinctly felt just below the ensiform cartilage, and when the patient is placed upon her hands and knees it disappears, and percussion shows a normal resonance of this region. On auscultation, an exceedingly rough but not loud murmur is heard. This murmur is occasionally only heard when pressure over the aorta is made, and is at all times much increased in intensity by it, and is not heard when the patient is placed in the position indicated above. No cardiac and no anæmic murmurs can be heard.

Pulse, 96; respiration, 16; temperature, 99.5°.

December 18.—No important change in the condition of the patient. She has occasional respites from pain, but her sufferings are generally intense, and are only relieved by large doses of morphia. No signs of disease of the lungs can be discovered by the physical methods of diagnosis. There are enlarged glands upon both sides of her neck, but especially on the right side, and an examination of the groin shows induration of the inguinal glands. When pressure is made with the hand over the lower part of the abdomen, enlarged glands can be felt within the abdominal cavity. A belladonna plaster is applied to the abdomen. The treatment consists in the administration of tonics and narcotics.

Before passing to the consideration of the symptoms presented by the case to-day, I will review the notes which I have just read to you. It is always important to do this, for we may learn in this way much in regard to the constitution of the patient. An illness may, moreover, be the direct or indirect result of one that has preceded it, and a careful study of a patient's previous history may thus sometimes enable us to make a correct diagnosis in a case in which it would otherwise be impossible.

The young girl before you appears to have had good health until two years ago, when the attack of pneu-

monia occurred. In spite of the very chronic course which this ran, she appears to have made in the end a fair recovery, and to have remained well until nearly a year ago. No destruction of either lung can have supervened, for there are to-day no physical signs of any marked disease within the chest. There is perhaps some harshness of the respiration under the clavicle on the right side, and the sound obtained upon percussion in that region is of higher pitch than in the corresponding part on the left side, but I do not think it is sufficiently so to indicate an aberration from the healthy condition. It is, however, probable that the illness from which she suffered two years ago has not been without its influence in producing the anæmia which is at present so prominent a feature of her case.

The neuralgic pains which occurred about nine months after she had recovered from the pneumonia may possibly have been of malarial origin, for she was then living at the South; or they may have owed their origin to anæmia. We have, unfortunately, very little clue to their real nature; but their occurrence shows a predisposition on the part of the patient to nervous disease. The cough and expectoration which succeeded the attack of neuralgia were probably dependent simply upon bronchitis, but tended, no doubt, to debilitate the patient still further.

We may now, I think, pass with advantage to the date of her admission here. At that time the pain in the abdomen was, as it has been ever since, a prominent symptom. She had suffered from it for at least six months. It was paroxysmal in character, but there was at all times a sense of uneasiness in the epigastric region. It was not accompanied by nausea or sickness of stomach, and we cannot learn that she had at any time thrown up blood either in an unaltered or in a partially-digested condition. Palpation and percussion led to the discovery of an ill-defined tumor below and to the right of the ensiform cartilage, and a distinct pulsation could be seen and felt in this region. Auscultation revealed the presence of a murmur, which was said occasionally to have had a musical quality; but more careful examination showed that the epigastric pulsation consisted in a forward impulse simply, and that no true expansile movement could be felt.

I have been thus explicit in stating the condition of the patient when admitted, because few physicians could have seen her then without having had suggested to their minds the possibility of the presence of aneurism of the abdominal aorta. The effect of the purgative, however, in removing the fecal accumulation in the colon, which was probably what had been mistaken for a tumor, rendered this view of the case less likely to be the correct one, and it is now my intention to endeavor to make, by a process of exclusion, a correct diagnosis.

In the first place, I do not think we have to do with an aneurism of the abdominal aorta. There is, at present, no distinct tumor in the epigastrium; the pulsation, which still continues, is of the character previously noted; there is no expansile movement of the abdomen, and no protrusion of the flanks occurring synchronously with the systole of the heart can be observed. The pulsation, too, becomes less marked, and sometimes wholly disappears, when the patient is placed upon her hands and knees; and in this position also the murmur is less distinctly heard and is not so harsh in quality. Now, it has been found that this position exercises but little influence upon the signs presented by an aneurism, while, on the other hand, its influence is great in cases in which the pulsation of the aorta is communicated to the abdominal walls through the medium of an overlying tumor. The reason of this is plain. In the latter case, when the patient is placed in

the position above described, the tumor, unless bound down tightly upon the aorta, will fall away from it; but where aneurism really exists, no change of position can prevent the blood from flowing into the sac.

Can we have to do in this case with an enlarged liver pressing upon the aorta and transmitting the pulsation? I think not; for, although there is occasional dullness to the right of and below the ensiform cartilage, this seems to me to be due rather to the great tenseness of the rectus muscle than to the presence of a solid body possessing any magnitude. For the same and other reasons I exclude tumors of the pancreas and stomach from consideration. There are several diseases of the stomach, however, which may occur to you as furnishing many if not all of the symptoms present in the case, such as gastralgia, ulcer, and cancer, but it is, I think, exceedingly improbable that any one of these conditions is present,—certainly neither of the two latter. We have, it is true, pain in all these affections, but we do not necessarily have the aortic pulsation. We may have emaciation, but we also have in cancer and ulcer of the stomach nausea and vomiting of food, neither of which has been a prominent symptom, while hæmatemesis in any form has not occurred. The term gastralgia hardly indicates a specific disease; it means simply that the subject of it has severe and paroxysmal pains in the stomach, and in that sense the patient before us undoubtedly has gastralgia, and of a very severe type; but the word is generally used to describe those cases in which the pain is purely of nervous origin and is generally independent of any lesion which can be detected by the eye or the microscope. In this case I believe that there is a lesion, and therefore prefer not to use this designation.

It is not probable that the symptoms depend upon gastritis, although possibly inflammation of the stomach may have occasionally complicated the original disease. The pain has been too violent—has been too decidedly paroxysmal—to allow us to adopt this as the correct diagnosis. Gastritis, moreover, is accompanied by a certain amount of nausea and vomiting, and the pain to which it gives rise is distinctly increased by the ingestion of food. There is also no indication of dilatation of the stomach, and it is impossible that inflammation of this organ could have existed in this case since the first occurrence of the pain without giving rise to relaxation of its walls. Tenderness on pressure is also absent.

Caries of the vertebræ often gives rise to severe pain, which may or may not be paroxysmal, and which is sometimes referred to the epigastric region as well as to the back; but there is no tenderness over the spine in this case, no diminution of power in the lower extremities, and no affection of sensation. It is, therefore, not worth while to dwell upon this as a possible cause of the trouble.

Having already devoted much time to demonstrating that there is no sufficient reason for thinking the case before you to be one of abdominal aneurism, cancer, or ulcer of the stomach, gastralgia or gastritis, or that the symptoms are due to the pressure of a tumor upon the aorta, it now remains for me to tell you what I believe really does exist. As I said when I commenced this lecture, I have found the diagnosis one of more than ordinary difficulty; but the more I reflect upon all the features of the case and the more I compare them with those presented last year by a patient in the men's ward, the more I am forced to the conclusion that the real lesion here is enlargement of the lymphatic glands, some of which have been developed in such directions as to press upon the nerves of the stomach and intestines; and I will now adduce all the positive evidence I have at my command in favor of this view. In the first place, there is enlargement of some of the external

glands, and notably of those of the neck and of the groin; and I have thought, on more than one occasion, that I could feel through the abdominal walls the mesenteric glands enlarged. I do not speak positively on this latter point, for it is possible that I may have been deceived. Still, the enlargement of the inguinal glands in a patient of a scrofulous habit would indicate, to a certain extent, that there was similar affection of the glands within the abdominal cavity. Then many of the physical signs are explainable upon this supposition,—as, for instance, the pulsation in the epigastric region, the murmur, and the diminution of both of these when the patient is placed in certain positions. The absence of marked dullness on percussion is also corroborative of my view, for it is scarcely likely that the glands situated around the aorta would ever become sufficiently enlarged to affect sensibly the percussion note in the epigastric region. Disease of the abdominal glands gives rise to emaciation, which is present in a very marked degree in the case before you, and which is otherwise so difficult to explain.

The enlargement of the abdominal glands is probably to be attributed to a scrofulous habit; but the question might arise whether the patient has not had at some previous time during the course of her illness an inflammatory affection either of some one of the abdominal viscera, or of the peritoneum. We know so little of her previous history that it would be impossible to say that this was not the case, and it may be that the pain originally due to local peritonitis, situated in the region of the stomach and liver, is now kept up to a great extent by the existence of adhesions restraining the free action of some of the abdominal organs. This is a condition the existence or absence of which it is difficult to demonstrate in the living subject; but none of her symptoms directly point to it. I am certain, moreover, that at the present time there is no inflammatory complication, no matter how chronic, for her temperature has rarely been above 99.5° F., and there has been at no time any other indication of a febrile reaction, which would almost necessarily attend inflammation.

I need not tell you that I regard the prognosis as exceedingly unfavorable. If the patient really has tabes mesenterica, as I suspect, it will probably not be long before she succumbs to it; and if it should be proved that I am mistaken, I should not be inclined to hope for a more favorable termination. I have been unable to effect any permanent improvement in her condition, and I have seen her, in spite of the administration of tonics and of my efforts to increase her strength, grow weaker every day. The pain deprives her of sleep, and is now only relieved by very large doses of morphia.

It is not necessary to say much in regard to treatment. Cod-liver oil and iodide of potassium naturally suggest themselves as the proper remedies; but she cannot take the former without the production of nausea, and the use of the latter was suspended after having been given a fair trial. She is now taking tonics, which are varied from time to time. Morphia, sometimes administered by the mouth and sometimes hypodermically, has been the remedy principally relied upon to relieve the pain, and it has been necessary to give her large doses lately to effect this result. The spirits of chloroform, and occasionally hot alcoholic drinks, have been found to be useful adjuvants to the narcotic.

Note.—By the courtesy of Prof. J. A. Meigs, into whose care the case subsequently passed, I am permitted to refer to the appearances presented at the post-mortem examination. No disease of the heart and lungs was found, and also none of any of the abdominal viscera. The glands of the mesentery were almost universally enlarged: a large gland was found between the cardiac end of the stomach and the spleen, and another attached to the pylorus and to the duodenum by means of inflammatory adhesion. —J. H. H.

ORIGINAL COMMUNICATIONS.

OSTEOLOGICAL NOTES.

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No. II.

THE SENILE SKULL.

AS is well known, the term senility is altogether a relative one. It has no exact connection with age, but with that period alone when the greatest number of tissues have taken on the characteristic changes. "Diseases may anticipate the ravages of time, the young as to years becoming old as to structure."

I have arranged my notes upon the senile skull under the following heads:

1. Under the general tendency to atrophy, thin plates of bone, variously situated,—viz., at the superior (cerebral) and anterior walls of the middle ear, the orbital plate of the frontal bone, the os planum of the ethmoid, the lachrymal bone, the processes of bones tending to close the openings into the superior maxillary sinus,—may be destroyed in part. The three first-mentioned localities may be perforated, while the remainder may disappear. Thus, it is said, the antrum can be more readily probed from the nose in the aged than in the young adult.

2. The changes which take place in the sinuses from old age are of two kinds, contraction and expansion. The first of these is remarked in the maxillary sinus, and is chiefly due to the secondary effects upon the nutrition of the upper jaw by senile loss of teeth and absorption of the alveoli. The second is observed more particularly in the frontal and sphenoidal sinuses, which may become slightly enlarged in old age. Occasionally all the sinuses tend to enlargement. It would be a near approach to the truth to say that the sinuses do not remain quiescent in old age, but exhibit an inclination either to contract or expand.—(*Catlin.*)

The groove for the lateral sinus may be deepened. In one specimen the lateral sinus of the left side was open from beneath, and communicated with the corresponding inflated "pneumatic process."

3. The roof of the mouth becomes thinned and smooth. Perforations, more particularly in the horizontal processes of the palatal bone, are occasionally seen. The entire surface is either flat or convex downwards; in the latter case a median depression may be seen.

This form of change is often associated with marked deviation of the nasal septum. The posterior free edge of the hard palate is crescent-shaped, on either side of a spatuliform posterior palatal spine. The old tooth-pits are ordinarily obliterated, extraordinarily widened and flattened, or else, as is not rarely seen in the molar region, the line may be compressed laterally, making in this way a thin vertical process.

That portion corresponding to the intermaxillary bone is sharp and rostrum-like. When it is remembered that this, the incisorial region, is an extension from the vertex of the primordial skull, its persistence in senility, at a time when the lateral regions may have undergone atrophy, is interesting.

4. The lingual process of the sphenoid bone, which is pointed and unites with the Vidian canal in the young, and which is sharply acuminate in the young adult, becomes either rounded with a conspicuous depression on its under surface, or atrophied, when it may even disappear. Occasionally several minute irregular cells are contained in this process.

The base of the pterygoid process may rarely be inflated and occupied by minute irregular cells.

5. The pterygoid process is liable to a change in inclination. In the young and adult skulls the process is directed somewhat forwards. In the senile skull it is nearly straight, with its anterior aspect flattened. Owing to the absorption of the alveoli, the process often descends conspicuously below the level of the hard palate. The outer plate of this process is frequently widened and extended downward along the plane of the lower fibres of the external pterygoid muscles.

The result of my examination is at variance here with that quoted by Dr. R. G. Snow (*Canada Journal of Dental Science*, January, 1871, p. 67), who states that "at birth they [the pterygoid processes] look very obliquely forwards and downwards. In adult age they have taken the vertical position, and in old age they have again returned to their primitive oblique position."

6. The space between the foramen magnum and the mastoid process, instead of being roughened and furnished for the most part with an irregular knotted process ("pneumatic process"), which may be directed downwards, may be either inflated and rounded, or flat and inconspicuous. It is fragile, and consequently often found mutilated. The interior is occupied by large and irregular cells. Of eighty-four examinations, this point was noticeable in fifty-seven.

7. In addition to the liability of the nasal septum to deviate from the median line,—a tendency not peculiar to the senile condition,—we occasionally observe its cartilaginous portion undergoing ossification. This in some instances extends to the borders of the anterior nares.

8. Atrophy of the anterior portion of the greater wing of the sphenoid and the posterior border of the orbital process of the malar bone, where they unite to form the outer wall of the orbit, is one of the most marked features in the senile skull. The septum may become so thinned as to be translucent, or an actual loss of tissue takes place, in which instance it progresses, as a rule, from below upwards. In this way its lower half may be entirely absent. In eighty-four skulls, examined with reference to this point, the opening was evident in thirty-seven, and thinning apparent in fifteen: in none was the septum as thick as in adult life.

At the time the above note was taken—three years ago—I was not acquainted with Hyrtl's ("Topograph. Anatomic," vol. i. p. 20) mention of this tendency to atrophy in the outer wall of the orbit in the senile skull. So far as I remember, he is the only author who alludes to it.

I have said nothing as yet of the lower jaw, which presents in its angle such an admirable character to determine the position of the skull, whether it be young, adult, or senile. I have reserved its consideration until now, that an instructive point of comparison (as I believe it to be) may be instituted.

In a previous number of this journal I endeavored to prove that the entire side of the face, inclusive of the temporal fossa and the malar bone, is of masticatory significance, inasmuch as the muscles moving the lower jaw take their origin there. Now, if this be so, its parts should show something similar to that conspicuous change in the form of the lower jaw: there should be alterations in form in the temporal fossa and malar bone, in harmony with the influences operating in modifying the form of the lower jaw.

Bearing this in mind while examining the orbit of the young child, it is found that the cavity is bounded externally by the thick, vascular, external angular process,—by an equally massive and vascular orbital plate of the sphenoid,—while the corresponding plate of the malar also presents similar characters. In a word, all these parts are disproportionately developed. They never afterwards assume such a size or carry so many vessels. The early union of the parietal and sphenoid bones

causes a depression of the floor of the temporal fossa. This, however, is as yet shallow, and the processes above mentioned, while relatively thick, do not portend.

The upper, outer, and inferior margins of the anterior orifice of the orbit are sharply defined. A well-marked pocket exists in the superior and external angle. It is at this portion of the orbit and extending thence to its centre that a character may be found for the skull of adolescence and the early adult stage. Numbers of minute foramina are here seen, varying from a small, faint patch—the area enclosing them not being elevated above the orbital plate—up to a large space, which may cover the greater portion of the roof of the orbit, and form an abrupt excrescence therefrom. The openings may be minute, and more or less circular, or they may assume the form of irregular pits, of varying sizes. Commonly the outer portion of the roof of the orbit is involved, but the inner may alone present the peculiar appearance. These openings have no apparent connection with the formative frontal sinus. One hundred and sixteen examples of this vascularity were observed. Of this number, thirty were in skulls from subjects of about six years of age. A slight development of this feature may be seen retained in the majority of the skulls of the adult, but is rarely seen in the aged.

The malar bone in the young has not acquired the quadrangular shape of the adult condition, but remains of a more triangular form. Its upper margin, entering into the lower and outer angle of the orbit, is less depressed than in the adult or senile specimens.

From the above facts I would conclude that the obtuse angle of the edentulous lower jaw in the young subject agrees with the shallow temporal fossa,—the triangular malar bone showing that the chewing power is as yet undeveloped. The weakness of the same power accounts for the want of traction downwards and outwards of the outer and lower angle of the orbit,—as the activity of the lachrymal function explains the pocket-like depression at the upper and outer angle of the orbit.

This, however, does not account for the thickening of the sutural lines in the outer wall of the orbit. I believe this to be due to the operation of the law that membrane-bones are thickest along their lines of termination, and that these in the above examples are more than ordinarily active, from the fact that the internal maxillary artery is relatively large during the development of the teeth,—all the parts being supplied by branches of this artery.

While tumors of different kinds, but more particularly the exostoses, are more frequent at the inner angle of the eye than the outer in the child, we rarely, if ever, find non-specific inflammation unconnected with obstruction of the lachrymal sac at or near the inner canthus. The outer angle is, however, not so exempted. The spongy character of the bones here interested, conjoined with the activity of vascular supply in the young, causes the external and upper portion of the orbit, together with the malar bone itself, to be often the site of strumous abscess.

A CASE OF CHRONIC PLEURISY AND BRONCHORRHŒA.

CUMULATIVE ACTION OF DIGITALIS—RECOVERY.

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THE following case is one of considerable interest, although not as representing a rare disease. There are several points especially worthy of attention. The rapid effusion into the left pleura, and the subsequent

persistent profuse purulent expectoration, with coincident physical signs of consolidation of lung-tissue, when viewed together with the general failure of nutrition and the persistency of the symptoms, made a picture full of doubtful augury for the patient's future. By the microscope alone was I enabled to make a hopeful prognosis, as an examination of the sputa showed that the lung-tissue was not undergoing destructive ulceration, and that the matters expectorated were purely bronchial. As a therapeutic study, the case was to me one of more than common interest. It is the first instance in which I have seen a distinct so-called cumulative action from digitalis. The woman had been taking the drug very freely without obvious effect for a long time, and when I saw her on a Saturday her pulse was 100. The next day being Sunday I did not see her, and the resident took no note of her pulse. On Monday the pulse had fallen forty beats, and continued to fall, although the digitalis was at once suspended. I think a perusal of the notes taken will be a sufficient proof to any one that the digitalis does exert a cumulative action at times. This action is probably dependent upon the slowness of its elimination. Not being thrown off as fast as taken in, it gradually accumulates in the system, until a point of blood-saturation is reached sufficient to give rise to serious symptoms. A record was kept, during the period of depression, of the amount of urine passed, but it was unfortunately lost. It showed, however, that the digitalis did not in this instance exert any very marked diuretic action. Very probably it is in such cases that the cumulative action is especially liable to happen, as when the kidneys are excited by the drug they probably remove it as fast as it is taken into the blood.

Another therapeutic point to which I desire to direct attention is the apparently great benefit derived from the use of alum by the atomizer. It seemed to act most happily in checking the excessive bronchial secretion.

A. W., English, æt. 46, a widow, came into the wards of the Philadelphia Hospital, Feb. 16, complaining of very great pain all over the left side, rendered very intense by forced breathing. There was a rough friction-sound all over the left side, especially marked posteriorly, with some diminution of vocal resonance, but no dullness on percussion. The next day (February 17), at my visit, I found the patient suddenly free from pain, with the friction-sound very much lessened, but with marked percussion dullness all over the lower side, extending when she was lying on her back to within one inch of the nipple anteriorly. She was ordered a blister (6 by 8) to the side, and calomel, nitrate of potash, and tartar emetic. These powders were not given as freely as ordered, and no decided constitutional effects were induced. The effusion into the chest steadily increased, and by the 21st there was total percussion dullness in sitting position to about an inch above the nipple, with total loss of inspiratory murmur below the line, and just above marked prolonged, soft, tubular expiration and feeble inspiratory murmur, with some subcrepitant râles, and still higher up sonorous râles, which were also present all over the right lung. The effusion kept on increasing, and by the 24th had totally filled the pleura, with the usual physical signs, the only auscultatory murmur being soft tubular breathing, heard only in the supra-spinous and the subclavicular regions. The mercurial treatment had been continued but feebly. She was also blistered again. No change occurring, on the 28th she was ordered Basham's mixture in large doses. This had no effect in increasing the amount of the urine passed, which averaged less than 500 cc., the average before having been 500 cc. There was now free expectoration. The diet given was the best afforded by the hospital, but no alcoholic stimulants were allowed. Repeated blisters were applied to the left chest.

On March 4 the first distinct signs of improvement were noted. The pain was much less, she felt and slept better, and above the third rib there was clearness on percussion and a distinct vesicular murmur on auscultation. There was, how-

ever, constantly increasing expectoration, and by the 12th she was spitting about a pint daily of thick purulent sputum.

On the 15th the Basham's mixture was stopped. At this time the fifth rib formed the upper limit of percussion dullness on the left side; above was a nearly normal vesicular murmur. The right lung was full of fugitive sonorous râles. The pulse habitually 100. She was ordered narcotics and

Pulv. Scillæ,

Pulv. Digitalis, āā, gr. xii.

Ft. mas. in pil. xii div.

S.—One four times a day.

She went on without any marked change, and on March 17 the line of commencing percussion dullness was at the sixth rib, with the usual physical signs of water in the pleura below, and there were fugitive sonorous râles above the sixth rib in the left lung and all through the right lung. She was decidedly weaker, with a very troublesome cough and exceedingly abundant (more than a pint) viscid, gelatinous, purulent sputum.

On the 19th, the muriate of ammonia cough-mixture (ten grains four times a day) was ordered.

March 23, the note is: *Left lung,—posteriorly*, want of resonance over whole surface; *anteriorly*, fair percussion clearness to about two inches below the nipple, with rude vesicular murmur. Pulse, 84; respiration, 27. Sputa decidedly less in amount. Was up a little yesterday, and complains of more pain in the side, for which a blister is ordered. She has been taking four grains each of squill and digitalis daily up to this date, and this is now increased to six grains of each.

On March 25 the sputum had become more profuse again, and she complained more of pain in the left side. The physical signs were percussion dullness all over the left lung posteriorly, with a feeble vesicular murmur, heard very high up, passing in the central part into a faint tubular breathing, which yielded to total silence over the lower lobe. When she was lying down, a faint friction-sound all over the region below the nipple could be heard. The respirations were 28 a minute; the pulse 100. I did not see her the next day (27th), but on the following day found her with a pulse of 69,—a fall of forty beats,—and she complained greatly of dyspnoea. She had been taking the digitalis regularly up to this morning, when it was stopped. The next day, in spite of this, the pulse had fallen to 49. The beats were very full and strong; the intervals between them very long. When raised up, she instantly became weak and faint, and the pulse quickly ran up to 100. The shortness of breath was better,—possibly owing to the use of Hoffman's anodyne. She was very nervous, and the slightest excitement would cause the pulse to beat much faster and become very irregular, although not intermittent. Owing to this, it was found impossible to take a sphygmographic tracing. On attempting to do so, the pulse instantly would run up to 100, and become so broken and hobbling as to be really alarming. No nausea. Bowels constipated. In the evening, the pulse, taken by Dr. McCoy, was 102; but the patient had been coughing very much, which may have caused the rapidity of beats.

March 29.—"Pulse, early in the morning, 70-80; vibratory." (Dr. McCoy.) When I saw her at 12 M., the pulse was 50, full and regular, with a peculiar vibratory thrill to the finger. Ordered $\frac{f}{3}$ iss whiskey every three hours.

March 30.—Pulse 54, very irregular, beating slowly and fully for a few beats, and then very rapidly for a half-dozen strokes; not intermittent, and without the thrill of yesterday. She is very much harassed with cough and exceedingly profuse sputum. The whiskey she gets regularly day and night, — $\frac{f}{3}$ iss every three hours.

April 1.—Pulse 87, regular. *Left lung,—posteriorly*, above the middle scapular region, the respiration, especially the expiratory sound, is rough and somewhat cooing. Below, total silence. Upper region, percussion note, absolute want of volume; high pitch. Below, pitch lower. *Laterally*, some percussion clearness found, with very faint murmur and an indistinct friction-râle. The vocal resonance has a much higher pitch on the left side, with greater distinctness than on the right side. Vocal fremitus totally absent. *Anteriorly*, percussion note good down to two inches below nipple. Respira-

tion somewhat rude; vesicular murmur lost about two inches below nipple. (This note is taken while she is lying on her back.) Line of percussion dulness alters with position. *Right lung*, nothing abnormal but exaggerated respiration. Cardiac sounds normal, except at the apex, where first sound is prolonged. Whiskey reduced to one-half the quantity. Sputa purulent, nummular, to-day. All treatment stopped but quinine, 8 grains; cod-liver oil; Lugol's solution, 20 drops t. d.; and compound iodine ointment to side. Morphia at night.

April 3.—Pulse, 92. No material change. Lugol to be increased one drop a day up to 30 drops t. d.

April 22.—Ordered six ounces of punch daily.

April 24.—*Left apex*, vesicular murmur rude,—very much so,—cooing in character, with marked prolonged expiration, and an occasional click in inspiration. *Right apex*, vesicular murmur somewhat softer. *Posteriorly*, vesicular murmur rude at right apex; same at left. Some friction-sound at left side. Percussion note very high-pitched at both apices anteriorly. Sputum now very profuse, somewhat nummular, purulent. On microscopical examination, no evidences of lung-tissue in sputa, which are made up of curious, small, irregular cells, containing each a smaller cell or a very prominent nucleus, and mucus- or pus-corpuscles.

May 8.—During the last two weeks the patient has taken gallic acid very largely, with, for a time, a very marked decrease in the amount of sputum expectorated, although at no time could the acid be chemically detected in the sputum. Lately, however, the astringent appears to have lost its power, and the expectoration has become more profuse. The iodine has been taken internally and applied to the side regularly; and as the pleurisy, judging from physical signs and pain, appears to have been relieved, all treatment is ordered to be stopped, except the cod-liver oil and whiskey, morphia to command sleep, and the use of inhalations of solution of alum, gradually increased in strength.

Under this treatment she slowly improved, and the note taken May 18 reads, "*Left lung*.—On inspection, the side slightly sunken in. Nothing abnormal on auscultation, except that the vesicular murmur is very weak in lower lobe and rude at apex, and some old friction-*râles* can be heard in the side. Percussion note over the side and back not quite equal in resonance to that of the other lung. *Right lung*, apparently normal. The patient is gaining much in strength, and, though the character of sputum has not changed, the quantity has very much decreased and the cough is much less troublesome. The inhalations to be stopped."

From this time the patient was treated simply with cod-liver oil, tonics, laxatives, and morphia, as required, and a constantly decreasing amount of whiskey, which she had been taking in large quantities. She steadily gained in strength and flesh, and by the latter part of June her cough had entirely disappeared, and she was apparently well. She was kept in the hospital a month longer, and was finally discharged, as fat as a seal, and in the best of spirits and health.

EXCISION OF THE KNEE FOR DISEASE;

FIRM UNION; DEATH FROM INTERCURRENT BRONCHITIS SIX MONTHS AND A HALF AFTER THE OPERATION.

BY JOHN H. PACKARD, M.D.,

One of the Surgeons to the Episcopal Hospital.

WHATEVER may be the reason assigned for it, the fact cannot be denied that excision of diseased joints, and especially of the knee, has found less favor in this country than abroad. In the excellent memoir of Dr. Hodges, of Boston, published in 1861, there are tabulated 238 knee-operations, of which 167 were British or from British sources, 54 German, 4 French, 3 Swiss, and 10 American. In Mr. Price's monograph (1865), 293 British cases are mentioned, and only 6 (!) American. Swain (1869) gives tables of 156 additional British cases, making the whole number 449.

Under my own observation, six excisions of the knee have been done in this city within the past two years. Two of them were for deformity, and were attended with the best results; of the other four, one was the case which I am about to detail, and the remaining three will probably be published by the respective operators. I think they were all, like my own case, satisfactory so far as the local treatment and its effects were concerned. Believing that this procedure is one deserving of further trial at the hands of American surgeons, I submit the following account:

Francis K., æt. 12, was admitted into the Episcopal Hospital, July 20, 1869, with very large and obscurely-fluctuating swelling of the right knee. Three years ago he injured the knee in getting over a fence, and has been lame ever since. He could go about with a crutch or stick, however, except part of last winter; since May he has been unable to walk at all. This was all the history we could obtain of his case. He was a black-haired, blue-eyed, delicate-looking boy.

On the 18th of September, the swelling having become larger and more painful, I tapped the joint subcutaneously with a trocar; a large quantity of grumous pus escaped. Early in October I opened it again with a bistoury. The discharge of matter, both at the time and subsequently, was very profuse.

October 12.—Symptoms of hectic appeared, but were checked in a few days by quinine and full diet.

On the 21st I performed a resection, making a U-shaped incision, dissecting out the patella, and gouging out part of the sawn surface of the tibia. Thin slices only of the bones were removed. The joint was in a state of pulpy degeneration. Five or six ligatures were required. The wound was closed with lead-wire sutures, a carbolic-acid dressing applied, and the limb placed in a pasteboard trough. Wine-*whey* was given freely, and wine of ergot, $\frac{f\text{ss}}$ t. d. He suffered no pain.

In a few days I substituted for the pasteboard trough a bracket-splint, so arranged as to allow of the dressings being changed without disturbing the limb.* He did very well, and grew fat and hearty.

November 26.—An immense discharge of thick yellow pus took place from the inner side of the joint. It soaked through the bed and formed a pool on the floor beneath.

December 6.—The front of the knee has assumed a very healthy appearance; the cicatrix is very firm. He had some diarrhœa, or rather a tendency to it, and was ordered quinine and opium in combination. His tongue was unnaturally red, and his pulse usually about 130.

December 22.—Union has evidently taken place between the bones. Discharge diminishing steadily.

February 6, 1870.—He has improved very much; pulse 96; no diarrhœa; very little swelling about the knee, and very little discharge.

February 16.—He is moving about the ward in a wheel-chair. A little more discharge; otherwise doing well.

March 28.—Some bagging of pus at the outer and back part of the knee. I made a counter-opening and introduced an oakum seton, which was removed in twenty-four hours.

April 10.—The limb is in excellent condition, the sinuses apparently closing. His constitutional symptoms are not so good. He looks blanched and thin. His tissues are soft; his pulse rapid. His stomach is irritable, and he has some diarrhœa.

After this there was not much change until April 28, when his parents took him home, about five miles from the city. Dr. A. C. Lambdin, of Germantown, kindly took charge of him then.

On the 6th of May he was sitting by an open window, when a change in the weather occurred, and he took cold. A severe attack of bronchitis ensued, of which he died, May 8. No *post-mortem* examination could be obtained.

I regret the imperfect character of these notes, which, however, set forth the main features of the case. The

* See American Journal of the Medical Sciences for April, 1870.

operation may certainly be called a successful one, since by it the boy's condition was greatly improved, and very firm union took place between the sawn ends of the femur and tibia. The cause of death was an intercurrent bronchitis, in no wise connected with the local trouble.

[Since the above was written, I have exsected another knee, for strumous synovitis, in a boy *æt.* 11, at the Episcopal Hospital. The case is so far (ten days) doing extremely well.—J. H. P.]

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY OF PENNSYLVANIA.

CLINIC OF PROF. AGNEW, SEPTEMBER 6, 1871.

Reported by Dr. Elliott Richardson.

CANCER OF BREAST.

THIS patient was a woman, *æt.* 35, who applied for surgical advice on account of an enlargement and induration of the right breast, which was the seat of a good deal of lancinating pain. She had first noticed this tumor in November, 1870.

Externally the skin presented no evidence of a diseased condition except a slight prominence in the upper portion of the breast. A digital examination revealed the presence of a tumor about as large as an orange, occupying the upper part of the gland. It was nodular, very hard, and heavy for its size. In the axilla of the same side a single enlarged lymphatic gland was found.

The woman was also suffering from a cough, had had hemorrhage from the lungs, and presented a more decided cachexia than could be accounted for by the existence of the tumor in the breast.

Prof. Agnew said that, from the unyielding nature, the nodular shape, and the great weight of this growth, he did not hesitate to diagnose scirrhus cancer. This somewhat common affection of the breast is considered by most pathologists of the present day to be the result of a constitutional disease which renders those who are the subjects of it liable to the production of tumors in many portions of the body, sometimes irrespective of local injury or irritation, but sometimes influenced by these causes as to point of selection.

It usually occurs between the ages of thirty-five and fifty, and in women shows a preference for the mammae and the uterus, probably on account of the menstrual disturbance, by which the latter directly and the former through sympathy are affected. These tumors are also frequently developed in the breast during lactation, another source of irritation applied to tissues presenting an extremely favorable seat for the development of abnormal growths, on account of the large amount of loose connective tissue therein contained. In this case lactation had not existed for the past three years. Prof. Agnew said he thought the affection of the lungs more likely to be of a tubercular than of a cancerous nature, not only from a history of ill health previous to the development of the tumor of the breast, but also from the fact that hæmoptysis due to carcinomatous disease of the lungs is an extremely rare occurrence; indeed, he could not recall a single case of such character, although he had seen expectoration streaked with blood. It must, moreover, not be forgotten that tuberculosis and cancer are never actively at work in the same person at the same time. They antagonize each other. The tubercular disease is generally kept in abeyance.

The lecturer thought no operative procedure advisable in this case, on account of the implication of the lymphatics of the axilla, a circumstance which would render an early reproduction of the disease at that point most probable.

The patient was directed to take iodide of arsenic in doses of one-twentieth of a grain three times a day for an extended period, with a view of arresting if possible the cancerous growth, while local applications of opium plaster were ordered to alleviate pain.

NECROSIS OF THE FEMUR.

A youth, *æt.* 19, apparently in possession of good general health, applied for treatment on account of trouble in the thigh. Situated on the inner aspect of the left thigh near the condyle was an opening, papular in character, surrounded by a discolored and depressed circle of skin, and discharging a purulent matter of offensive odor. The limb in this locality was somewhat but not greatly thickened. The affection had commenced about three years ago, but no history of local injury to the part could be obtained.

Prof. Agnew said the appearance of the opening and its surroundings was characteristic of fistula leading to dead bone, —whether of the nature of a sequestrum or of exfoliations could be determined by the probe. This instrument was then introduced, and carried down until it came in contact with living bone, then through an opening in this, when a sequestrum of dead bone was felt.

The lecturer said the disease had had its origin in periostitis, probably due in this case to severe muscular action, and the inflammation of the periosteum had resulted in the death of a portion of the shaft of the femur. The processes following the death of osseous structure are of a character analogous to those which follow gangrene of the soft parts. A line of demarkation is formed between the living and the dead portions, and granulations are thrown out which gradually surround and take the place of the necrosed bone. The latter now becomes a sequestrum, and, undergoing a slow process of disintegration, is discharged through an opening in the soft parts corresponding with one in the new bone. This process is tardy, and, if the sequestrum be large, may continue for years. When this is the case, an operation for its removal is advisable; but great care must be exercised in regard to a selection of the proper time for operation. There is much more danger to be apprehended from adopting this treatment too early than from delay, for if attempts are made to remove the dead fragment before it has become well detached or defined, the operator is obliged to cut away portions of living bone, which procedure is in many cases followed by further necrosis, and, consequently, a continuation of the trouble. On the other hand, if the inconvenience, either on account of pain, offensive discharge, or the uselessness of the member affected, be great, unnecessary delay should be avoided. The professor said that, in the case before him, the bone did not seem to be movable, but he thought that in about two or three weeks it would be perfectly safe to operate for its removal.

JEFFERSON MEDICAL COLLEGE.

SURGICAL CLINIC OF PROF. S. D. GROSS, SEPT. 13, 1871.

Reported by Ralph M. Townsend, M.D.

PURULENT OPHTHALMIA.

THIS patient, a baby boy aged two weeks, presents a typical example of purulent ophthalmia. An adhesion or sticking of his eyelids was noticed the second day after birth, and this condition has continued up to the present. Much matter is now being discharged, and, on the lids being separated, ulceration and opacity of the corneæ are found to exist. Many theories are brought forward to account for this condition, among which leucorrhœa in the mother stands prominent. When specific causes, such as gonorrhœa or syphilis, have to do with this affection, they frequently result in complete destruction of the eyes in a very few hours. The lids in this case are very much swollen; sometimes we find them so stiff from the effusion of plasma that it is almost impossible to separate them so as to bring the eyeballs into view.

Treatment.—The first thing demanded here is cleanliness. Use a good syringe to wash away the pus that otherwise accumulates and acts as an irritant; a sponge will not answer the purpose. This syringing with tepid water must be done at least a half-dozen times in the twenty-four hours; indeed, it can hardly be resorted to too frequently. The use of the tepid water should be followed by a solution consisting of the one-eighth of a grain of corrosive sublimate and two drachms

of lime-water to six drachms of distilled water. Such a solution acts at times almost as a specific.

This child was also ordered the one-fourth of a grain of quinine, in solution, three times daily; light was directed to be excluded from the eyes, and one drop of laudanum to be given at noon and bedtime, to keep the child quiet and to prevent its rolling its eyes in their sockets, and thus adding to the existing inflammation.

September 16.—This child returned to the clinic with an evident improvement in the left eye, but the sight of the right eye was irretrievably destroyed. The child nurses and sleeps well, and does not seem to suffer. The treatment was ordered to be continued.

EQUINO-VALGUS.

A little girl, aged eight years, came to the clinic from Norristown with an affection of her right leg and foot. The former is smaller than its companion, and is attenuated and flabby, although the thighs are of equal size. The foot is everted and the sole turned outwards, owing to contraction of the peroneal muscles. The heel is drawn up by the shortening of the tendo-Achillis, and there is an unnatural hollowness of the sole of the foot, due to the contraction of the plantar fascia. This condition is a result of paralysis which came on in the first year of this girl's life. Dentition is a common period at which paralysis, whether complete or incomplete, occurs, and it sometimes comes on in a few hours.

Treatment.—Chloroform was administered, and, when the child was fully under its influence, the tendo-Achillis was subcutaneously divided. Like division of the peroneus tendon and plantar fascia allowed the foot to regain its natural position and aspect. The punctures made by the tenotome were all protected by strips of adhesive plaster: they will probably unite in twelve hours. The strips should be removed at the end of the sixth day and the foot well washed: it should be regularly douched with hot and cold water, daily, for some time afterwards, and the leg well rubbed with stimulating liniments, flagellated, and shampooed. A proper shoe was adjusted to the foot immediately after the operation.

FRACTURE OF THE HEAD OF THE FIRST METACARPAL BONE, SIMULATING DISLOCATION OF THE FINGER.

Charles G., aged 9 years, came to the clinic with a painful affection of his hand. There was a marked swelling over the distal end of the first metacarpal bone, having the appearance of being caused by a dislocation on the dorsum of the hand of the first phalanx of the index-finger. Two physicians had so pronounced the nature of the injury, and had made unsuccessful efforts at reduction. The accident happened nearly two weeks back, and was caused by striking the hand against a fence and endeavoring to catch a base-ball simultaneously. On measurement, however, the index-finger was found to be as long, both in absolute length and in its relations to the neighboring fingers, as the index-finger on the opposite hand. This hardly comported with the idea of dislocation, for with two exceptions—*i.e.* the humerus in the axilla and the head of the femur in the thyroid foramen—there is shortening in all the dislocations of the body.

After carefully examining the parts, Prof. Gross pronounced the injury to consist in a fracture of the metacarpal bone, extending into the joint. The parts were directed to be wrapped in a strong solution of lead and opium, the hand kept in a sling, and the boy to report again at the end of a week.

EPULIS.

Maxie T., aged 7 years, has a tumor on the gum, which has existed for about three months. Last week he had a tooth extracted, which seemed to be intimately connected with the mass. This tumor is of a fibroid character, and undoubtedly commenced its growth in the socket of the tooth, which it loosened and pushed before it. The tumor was defined as an epulis, and is unusual at this period of life, the lecturer stating that he had never met with a growth of this kind at so early an age. Sometimes such a structure as this takes on epithelial action; at present it is the seat of a discharge of a disagreeable odor. A tumor of this kind may acquire sufficient bulk to interfere with mastication, deglutition, etc. It is liable to return, and the only remedy for its relief is excision of the piece of bone to which it is attached.

Chloroform was administered, and on taking firm hold of the growth it peeled off from the jaw like a piece of old moss from the bark of a tree. Two teeth that seemed implicated were drawn, and the jaw-bone, being soft, was thoroughly chiselled out, in place of a section being removed by means of the saw.

The especial care that must be taken with patients while under the influence of an anæsthetic during operations about the mouth was well shown in this case. The parts were very vascular, and repeatedly the patient had to be turned on his side and the head depressed, in order to evacuate the blood, which constantly ran into his windpipe and threatened to strangle him.

In connection with this case, Prof. Gross exhibited to the class two pathological specimens, removed in private practice during the morning. The first and larger one was a growth taken from the right forearm of an old lady seventy-two years of age. It had the appearance of a mushroom, and the skin on which it rested was greatly congested. It discharged a thin and offensive sanious fluid, but was the seat of no positive pain, if a slight twinge now and then might be excepted. It rested on a broad base, but, on removal, the subcutaneous fatty and cellular tissues, to all appearances, were found to be perfectly healthy. Section of it resembled section of the pancreas or mammary gland of a young subject. It occasionally bled, and was undoubtedly an epithelial outgrowth of the skin.

The second specimen resembled a large wart, and was taken from the lower lip of a man aged eighty years. Its base was greatly indurated, and it was defined as an epithelial cancer.

CYSTIC TUMORS SUPERADDED TO AN EPITHELIAL GROWTH UPON THE FACE.

Amelia P., aged 45 years, married, and the mother of several children, came to the clinic laboring under great deformity of the face, especially marked on the right side. The growth involved four-fifths of the nose, the whole of the cheek, and a portion of the forehead. At the apex of the tumor, corresponding to a point over the malar bone, there was a feeling of softness, as if caused by the presence of some fluid. The lower eyelid was wholly destroyed by ulceration, the upper one partly so, and the swelling was so great as totally to hide the eye. The anterior nares were expanded, and on looking in the tumor was seen encroaching upon the cavity of the nose. In the mouth everything appeared perfectly natural. This trouble came on three years ago, and commenced with an ulceration of the lower eyelid. Twice the affected portion was removed, but the onward advance of the disease was not checked by the interference. Eight months ago the growth commenced to implicate the nose, and now the left nostril is occluded, and there is a watery discharge from the right. The patient lives in New Jersey (a State remarkable for furnishing the College clinic with a number of growths of this and similar kind), and, although she is thin and pale, says she sleeps and eats well, and has not much pain. The lecturer stated that he recognized an ordinary epithelial disease in that portion of the growth affecting the upper part of the cheek and eyelids, but that there was evidently superadded to this epithelial growth a tumor of another character, whose precise nature at present he had not determined. Its external features resemble those of encephaloid. It also evidently contains cysts, for an exploring-needle, introduced into one of the soft portions of the tumor, furnished a glutinous or jelly-like fluid, of a yellowish color, which exuded in considerable abundance. Introduced at another point, the needle furnished a discharge more pus-like in its character. The fact that this tumor has not encroached upon the mouth would seem to indicate that the antrum as yet remains unaffected.

An operation at the present time would be out of the question. There would necessarily be a great deal of shock and hemorrhage, and probably pyæmia or erysipelas would supervene.

Tonics, attention to the bowels and secretions, and the avoidance of stimulating meats, as having a tendency to make the tumor grow, are about all that are here indicated.

The patient was ordered a dessert-spoonful of the elixir of calisaya bark in combination with five drops of Fowler's solution of arsenic three times daily.

CORRESPONDENCE.

ON A SPEEDY CURE OF GONORRHOEA.

TO THE EDITORS OF THE PHILADELPHIA MEDICAL TIMES.

IN the *Lancet* for May 13, 1871, there is a communication from Dr. Foster, of Leeds, on the "Speedy Cure of Gonorrhœa by Local Treatment only." He expresses great surprise that a complaint like gonorrhœa, owing its origin to a purely local cause, and usually unattended with any constitutional disturbance, should ever be treated by any other than local remedies.

His ideas seem to me so correct, and his views are so much in unison with my own experience, that I have ventured to ask leave to give expression to my notions in the *Times*. I think it cannot be too deeply impressed on the minds of medical men that the practice of dosing the unfortunate victim of the complaint with copaiba, cubeb, and various other remedies (whose name is legion), with a strong probability and, indeed, almost certainty of deranging his stomach and digestive organs, to say nothing of the nauseous character of the drugs, is useless and unwise in the extreme. An ordinary uncomplicated gonorrhœa is as purely a local disease as a common "cold in the head" or inflammation of any other mucous membrane. Its natural tendency is to recovery, even without treatment; and if any be pursued, it should be of the mildest character, such as weak injections of acetate of lead or sulphate of zinc, never exceeding two or three grains to the ounce of water. I prefer rose-water to the ordinary distilled water, as it is in itself slightly astringent. This or some other injection equally simple, for which the doctor has a fancy (and we all have our pet remedies), assisted by a cold sitz-bath morning and evening, or, if that be impracticable, by affusions of cold water, will generally effect a cure in a short time, without the risk of upsetting the stomach, destroying the appetite, and, what to some men is worst of all, the liability of detection and exposure to their friends or acquaintances.

Such are the views which have governed me for many years in the treatment of this affection, and I have not yet seen any good reason to depart from them. Of course, any complication that may supervene, such as swollen testicle, or inflammation of the bladder or prostate gland, requires remedies suitable for such conditions; but a simple clap is always amenable to mild measures.

THOMAS F. BETTON.

GERMANTOWN, August 29, 1871.

ON VASCULAR MURMURS WITHIN THE LUNGS.

MESSRS. EDITORS:—In a clinical lecture of mine which you published in the number for April 15, I analyzed a case of vascular murmur heard in the neighborhood of the right mamma, and arrived at certain conclusions which I believed legitimate. At the time I was not acquainted with any similar case, and therefore felt the less confidence in the results of my analysis. Quite recently I met with an abstract of several more or less analogous instances in the *Prager Vierteljahrschrift*, 1870, Bd. iv., *Analect.*, S. 30, which naturally renewed my interest in the subject. Supposing that

some others of your readers may be pleased to see the article, I subjoin a translation of it, and remain

Yours very sincerely,

ALFRED STILLÉ.

1500 WALNUT STREET, October 3, 1871.

"Bartels treats of cardiac systolic murmurs heard in the lungs (*Deutsch. Archiv f. klin. Med.*, 1869, pp. 111-125), and Immermann describes a case of cirrhosis of the lung, with consequent narrowing of both pulmonary arterial trunks and of their primary branches, in which a systolic murmur could be detected in front of the heart and above it, and also in the back. Bartels observed seven analogous cases. One of them resembled that of Immermann; in five other cases there was a partial induration of the lung-tissue by chronic pneumonia. . . . In the seventh case, the murmur existed over one lung that had long been compressed by a pleuritic effusion, but which had discharged through a fistulous opening. The effusion, however, accumulated anew, and as it did so the murmur grew weaker, but became louder again on the evacuation of the fluid. Bartels supposes the murmur to have been generated in this case by the pressure of the indurated upper lobe of the right lung upon a branch of the pulmonary artery, and that the murmur disappeared when the effusion was excessive, but returned when this had partially subsided. He also judged that it could not have arisen in the main trunk of the pulmonary artery, because it was audible only above the third rib. In the remaining five cases, he was of opinion that the murmur originated in a dilatation of the arterial branches, as a similar one is heard in certain cases of vascular goitre. The vascular channel, he supposed, was rapidly contracted by the obstruction of a considerable area of lung-tissue, the mass of the blood not being at the same time proportionately diminished, wherefore the pressure of the blood was increased within the narrowed vessels, which consequently underwent dilatation. Under these circumstances, the murmur became intensified during inspiration, for by that act the current of the blood was quickened and its pressure augmented."

ON FREEZING BEEF-ESSENCE.

TO THE EDITORS OF THE PHILADELPHIA MEDICAL TIMES.

THE difficulty of inducing some patients, especially children, to take food when the throat is inflamed from any cause, is at times a very serious one; and I therefore beg leave to present to your readers a remedy which was of the greatest service in a case which came under my observation some time since.

A child was seriously ill with scarlet fever, and, owing to the condition of his throat, it was almost impossible to induce him even to attempt to swallow the beef-tea which his condition imperatively demanded, although he took ice with avidity. He was evidently sinking, when his father suggested that beef-tea made according to Liebig's formula might be readily frozen into a sort of water-ice. This suggestion was immediately carried out, and without trouble, a confectioner freezing the beef-tea, a pint at a time, into a firm mass. Portions of this the child took readily, finally recovering,—a result due in great measure to his father's ingenious device.

It is of course necessary to keep the frozen mass surrounded with the freezing mixture, but with this precaution it may be kept for a great length of time.

It seems to me that this idea is capable of sufficiently wide application to make it of interest to many members of the profession.

I am, sir,

Very truly yours,

HORACE BINNEY HARE.

229 SOUTH SIXTH STREET, September 23, 1871.

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EDITORIAL.

LACTIC ACID AND ACIDULATED PEPSIN IN CROUP AND DIPHTHERIA.

DR. WILLIAM H. DOUGHTY, in a valuable article in the *Richmond and Louisville Medical Journal* for August, 1871, discusses this subject, alluding to a former paper of his own which we recollect reading in the same journal for December, 1868, and which impressed us favorably. In the treatment of the case there reported, he was led, by reflections upon the physiology of digestion, to devise an artificial gastric juice as a substance rationally adapted to dissolve the membrane.

Later, his attention was directed to the experiments of Bricheteau and Adrien on the "Solubility of False Membranes" in lactic acid and other agents, published for the first time in this country in the *American Journal of the Medical Sciences* for October, 1868.

Again, the experience of Weber, of Darmstadt, published in the *Medical News and Library* for April, 1870, from the *Medical Times and Gazette* of January 22, 1870, further attracted his attention. The latter used lactic acid first only after the operation of tracheotomy, partly with a view to keeping the tube clean, but partly, also, hoping that it might affect the membrane extending down into the bronchi. The results were so favorable that he was induced to try it in severe cases of croup before having recourse to tracheotomy. "*Since then he has not once had occasion to operate, and has not lost a single case of croup.*"

We concur in the surprise entertained by Dr. Doughty that this method has not more generally attracted the attention of American physicians, or at least that the results of their experience have not been more generally published. The experiments of Bricheteau and Adrien, and the experience of Weber, have shown an undoubted rapidly solvent action of lactic acid on false membrane, while Dr. Doughty's experiments and experience have shown a similar though less rapid action by an artificial gastric juice made of Boudault's pepsin, \mathfrak{Dij} , dilute muriatic acid, gtt. v, and distilled water, $\mathfrak{f3iij}$, filtered. According to Weber, the patient was made to inhale a solution of lactic acid, fifteen to twenty drops in half an ounce of water, first every half-hour, and afterwards, when the respiration improved, a solution of ten to fifteen drops in half an ounce of water, measures being

also taken to protect the face and eyes. These substances produce this solvent action in not less than seven hours' continuous use, and, since such use is impossible, not less than twenty-four hours' intermittent use is necessitated. Even then it does not follow that the fibrinous substance will be regularly discharged by expectoration, or that by the time the inhalation ceases the air-passages will be thoroughly cleared of the obstructing mass. In the case last reported by Dr. Doughty, the pepsin solution had been used twenty-seven hours intermittently (equivalent to about seven hours continuously), and very little expectoration had taken place, when the air-passages were suddenly flooded with warm vapor, so as to promote expectoration, and "the digested, pulpified morbid product was brought away in great quantities, to the sensible relief of the burdened organs and the danger of the case." The patient, a child nine years old, recovered.

In the *London Practitioner* for September, a case of croup treated by lactic-acid inhalations is reported by Dr. N. L. Butler. A mixture containing two-thirds water and one-third lactic acid was applied every third hour, each application being continued not more than two minutes, instead of using only two or three lengthened applications in twenty-four hours, as practised by Dr. Barthez. A mercurial treatment which was instituted on the day previous to that on which the inhalation was first employed was, however, continued during the use of the acid; and, although the child began to improve immediately, and the improvement continued until her ultimate recovery, the case can hardly be considered admissible in evidence.

We have thus given prominence to this subject, because, as intimated, we feel that the plan of treatment has not sufficiently claimed the attention of American physicians, and we desire to urge its trial. Certainly, if the observations of the writers abroad and in this country are to be relied upon, it affords the most hopeful plan of treatment to which attention has been called. We are aware that in this city the treatment has been attempted, and that with apparent want of success; but we doubt whether the time and care referred to as necessary have been given. It should be used early in the attack.

LEADING ARTICLES.

MEDICAL EDUCATION ABROAD.

II.

IN the last number we presented a brief sketch of the system of medical education as it at present exists in the three great capitals of Continental Europe. We pointed out as the distinctive features of this system—for it is in all important respects the same in Vienna, Berlin, and Paris—the strong governmental protection which the schools receive, the intimate connection between didactic and clinical teaching, the large number of special courses of lectures delivered by non-

official teachers, and, finally, the possession of more or less elaborate accessory institutions, such as pathological and physiological laboratories.

We have purposely given the first place to the constant and powerful support and protection which are afforded to the medical schools by the governments of their respective countries, because these are, in our opinion, almost indispensable prerequisites for their success. The schools are thus enabled to exact from the student a prolonged course of study, and to maintain at a very high point the standard of acquirements necessary for obtaining a degree. We confess that we are far from sanguine as to the possibility of attaining these results in a democratic country, where no supervision is exercised by the government over professional education. It is apparently impossible to educate the public mind to an appreciation of the value and necessity to the practising physician of a thorough education, and it too often happens that we find persons of good general intelligence reposing implicit trust in physicians whose only claim to confidence lies in their tact, amiability, or pleasing address. It must always be a most difficult task, therefore, for any school or combination of schools in America to elevate materially the standard of medical education, since with each advance in the acquirements demanded of the applicant for a degree, there will be a rival school starting into existence and entering into dishonorable competition by offering to confer its diploma upon easier terms. It is indeed the need of a wise and judicious protection which might prevent such degrading rivalry, that is even more strongly felt in this country than the mere want of pecuniary support so liberally furnished by governments abroad to their medical schools. In its absence, the utmost that can be accomplished at present is to complete the development of our educational system to the highest point, so that we may be able to offer freely every opportunity to the student, and to endeavor to persuade him to profit thereby, since it is impossible to compel him to take advantage of the facilities presented.

As, however, this effort is comparatively a recent one in America, and we are still far from being able to offer facilities for study equal in quality and variety to those found in the great cities of Europe, the question naturally arises as to how far it may be desirable for American students of medicine to go abroad for the purpose of pursuing their professional studies. This question presents itself to us very frequently, and is far more difficult to answer than it was fifty years ago, when the rule was absolute that all who could possibly afford the expenditure of time and money should complete their medical studies during a residence of two or three years at some of the great European schools. It is of course apparent that the greater diffusion and interchange of medical knowledge effected during the few last decades have done much to equalize merely didactic teaching the world over, so that it is no longer necessary to be actually present in the body to sit at the feet of any great teacher; and, indeed, we firmly believe that, so far as concerns purely didactic teaching, es-

pecially of the applied or practical branches of medical science, the chief schools of America may boldly challenge competition with those of any other country. When, then, we bear in mind that the official courses of didactic instruction constitute a large proportion of the preparation necessary to obtain a degree abroad, and that a number of years must be spent in securing it, we have no hesitation in expressing our opinion that it is no longer desirable for American students of medicine, not intending to reside and practise in foreign cities, to obtain a diploma from any of the European schools. There is another consideration of importance which may be added to confirm this opinion. There is much variety in the diseases of different countries, in part owing to peculiarities in the constitutions of the inhabitants, in part to atmospheric and climatic conditions, in part to the fact that some affections are prevalent and assume a severe type in one country which are mild and of rare occurrence in others. Not only so, but, partly from this latter cause, partly also from diversity of theoretical views, the modes of treatment recommended at different schools vary considerably. It is manifestly disadvantageous for a student to spend from four to six years in becoming thoroughly familiar with certain forms of disease and types of constitution which differ more or less markedly from those he will be called upon to treat in his own practice, and for him to gain experience with certain modes of treatment which will prove more or less inapplicable to the diseases of his native land.

We must, finally, allude briefly to another consideration, of a social and moral rather than of a medical character. Without referring to the numerous seductive forms of vice which render life in Vienna, Paris, and Berlin so dangerous to young men, we cannot doubt the injurious influence of a prolonged residence in those cities at the time of life when habits are most readily formed. It must frequently happen that long familiarity with modes of life and social customs so widely differing from those in America will, to a certain extent, unfit a man for pursuing a profession happily and successfully after his return to this country.

But, if we would most unhesitatingly dissuade any student from going abroad with the intention of studying four or five years and obtaining a diploma from one of the European schools, the case is far different with regard to a shorter visit there, made after graduation, with a view to obtaining more complete knowledge of some special branch of medical science. We have already called attention to the fact that the superiority of these schools depends chiefly upon the very great advantages they offer for the study of specialties. Indeed, to so great an extent has the system of multiplying special courses of instruction been carried in some schools, that we fear that, although it may lead to the acquisition of a minute and precise acquaintance with limited portions of medical science, it must also conduce to the exclusion of that broad and comprehensive, though less scientifically exact, grasp of the whole field, which is of such vast importance as a foundation for practical skill. To any

one, however, who has been thoroughly instructed in all the didactic branches, as well as in general clinical medicine and surgery, the opportunity of pursuing for a short time some special branch of practice is attended with unmixed good. The mode of delivering these special courses of instruction which is followed abroad is most admirably adapted to the convenience of the student. The course usually extends over but a limited period, say six or eight weeks, and the number of students is also so limited that each one is able to secure the full advantages of personal instruction. No sooner has one such course been concluded than a similar one is commenced with a second class, and the student can therefore take several courses under the same teacher within a period of a few months, or, by passing from one city to another, can, during a single session, secure instruction upon any specialty from the most distinguished teachers in Vienna, Berlin, and Paris. It must not be forgotten also that, at the same time, much valuable information, other than of a purely medical character, is gained. To any man filling so important and prominent a position in society as every successful physician must do, knowledge of the world, and of the language, manners, and modes of living of the principal nations, and that culture a taste for which is so strongly inspired by travel, by observing the triumphs of art, and by intercourse with men of high and varied attainments, are of the greatest importance. So that the opportunity for acquiring these latter advantages must be classed among the strong inducements which lead young medical men to spend a short time in Europe. We should unhesitatingly, therefore, advise all who, after obtaining a degree in America by three years' faithful study and after fully availing themselves of the clinical facilities here afforded, find themselves in a position to travel, to spend a year, or even six months, on the Continent, in the study of whatever special branch of their profession they most strongly incline to. They may rest assured that they will never regret having done so, but that, like all expenditures of time and labor judiciously made in preparing for the work of life, the investment will quickly yield such large returns as to more than repay itself. There are, however, we well know, but a very limited number of our young medical men who can avail themselves of such advice, and the vast majority of our students must look within the limits of American cities for all the advantages they can ever hope to enjoy. This simple fact clearly indicates the duty of the teachers in our own great medical schools. Let them press forward the work of organizing and developing their systems of instruction, increasing their educational facilities, obtaining the most ample clinical basis for their practical courses, and affording full opportunities for the thorough study of every important special branch, whether of science or of practice. Let them be unwearied in their efforts to elevate the tone of public sentiment upon the subject of medical education, and to awaken and enlist the active interest of wealthy, public-spirited men and women in the support and extension of our medical institutions, so that ultimately, by the disinterested gen-

erosity of private individuals, America may be able to boast of as complete and efficient a system of medical education as even imperial bounty has succeeded in establishing abroad. Thus and thus only can our representative men discharge the debt they owe to medical science, medical education, and the future medical men of America. Thus and thus only, but surely thus, can they advance the growth of a truly national medical school, not limited to any one centre, but with a representative branch in every great city of our land, and which shall extend to all who seek its instructions as complete, enlightened, and advanced a system of education as the age affords.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY, SEPTEMBER 14, 1871.

THE PRESIDENT, DR. JOHN ASHHURST, JR., in the chair.

DR. ELLIOTT RICHARDSON presented a specimen of *syphilitic necrosis of the skull*, and said that the patient from whose body it was removed was a native of Philadelphia, aged 47 years, a sailor, and, according to his own statement, a man of temperate habits.

He was admitted to the venereal wards of the Philadelphia Hospital, August 13, 1868, and remained there until his death, which occurred on the 9th of the following September. He had been under treatment at the Pennsylvania Hospital from January 11, 1868, to the day of his admission to the Philadelphia Hospital.

The notes which were taken of the case were not preserved, and the doctor was only able to state from recollection the patient's condition at the time of his admission to the wards of the last-named institution. At that time he was extremely emaciated, and was suffering from fully-developed hectic fever. His scalp was elevated at nearly all points by accumulations of pus beneath, and through openings in some of these, dead bone in large masses could be felt. The patient said that several fragments of bone had from time to time been removed. Dr. R. thought that there were rupial ulcers in various parts of the body, but he did not recollect that any evidences of necrosis of other bones than those of the skull existed. He was not afforded an opportunity to make a post-mortem examination, but was able, with the assistance of his colleague, Dr. Beecher, to secure this specimen of the skull.

On examination, it appeared that scarcely a single bone of the skull had escaped alteration. The frontal, the parietal, and the occipital bones had been nearly all destroyed, leaving a space extending, in the median line, from the occipital protuberance to within about an inch of the orbital arch of the frontal bone, and varying in width from one and a half inches at the anterior portion of the parietal to three inches at the frontal, and about five inches in the region of the lambdoidal suture, entirely void of any osseous structure. At the time the post-mortem was made, the occipital portion of this space was occupied by a delicate network of bone, consisting principally of the external and internal tables, and supporting in its meshes two fragments of a diseased osseous structure, of a dull sage color and irregular outline, one fragment measuring about one and a half inches by one and a quarter inches, the other about two and a half inches by two inches. These fragments were much heavier than any normal osseous structure; they seemed to have been the result of a change in the diploic portion of the cranial bones, for the tables were seen extending over them for a short distance, and had apparently at one time completely covered them, but have gradually ulcerated away, either before or after the death of these diseased pro-

ductions. Notwithstanding the most careful handling, this network was broken down subsequently. Fragments of a similar nature were seen still imbedded in the remaining portions of the frontal, parietal, and occipital bones. The temporal bones appeared to have undergone less change than any other portion of the cranium. Of the bones of the face, the left turbinated bone and the vomer were nearly destroyed. The left superior maxillary, the left nasal, and the left malar bones, and the left greater wing of the sphenoid, the right turbinate, the lachrymal, and the ethmoid bones, were extensively diseased. The right malar, the right nasal, the right superior maxillary, both palates, and the inferior maxillary were least affected.

A considerable portion of the floor of the left orbit and the left superior alveolar process have been destroyed.

Dr. H. ALLEN said the specimen was interesting—first, from the extent of loss of structure of the vault of the cranium,—a fact which confirmed an observation of his own, that the base of the skull is not affected when the vault is: all that part of the skull developed from cartilage being free from disease, while that developed from membrane is affected. Second, that the upper portion of the greater wings of the sphenoid bone is extensively involved; he had often noticed this. Third, that the roof of the orbit to the outer side and the external angular process of the frontal bone are affected in like manner.

Dr. W. PENN BUCK presented for Dr. F. F. MAURY a tumor of the clitoris, removed from a woman aged 28; also a photograph of the tumor *in situ*. The tumor had been growing for three years. At the end of the first year it was the size of a hen's egg, after which it remained stationary for nine months, when it again rapidly grew until it attained its present size, about three inches in diameter, and necessitating its removal. It was covered by an integument like that of the scrotum.

Dr. H. ALLEN presented the specimens from a case of abscess of the anterior mediastinum. (A full account of this case will appear in the next number of the *Times*.)

REVIEWS AND BOOK NOTICES.

ODD HOURS OF A PHYSICIAN. By JOHN DARBY. 16mo, pp. 256. Philadelphia, J. B. Lippincott & Co., 1871.

What man is there who cannot own to moments of solitude in which his soul slips the leash of its body and courses at large into the illimitable ether? Now, perchance, it strives to interpret the sigh of the wind, or the unrest of the sea: anon it strains to pierce the mystery of life,—that riddle of the Sphinx. Now it yearns after some vague tabernacle, not of flesh, and yet substantial, palpable, and yet ethereal; and now, shrinking from this foretaste of immortality, and ill at ease, because disembodied before its time,—and, therefore, adrift, and not the self it one day shall be,—it hastens back to its "mortal coil." Such are the fancies and contradictions of our day-dreams; and who has not thus filled up the voids of his material life?

Of such a cast are the "Odd Hours" of John Darby; and in this practical world, where few care to acknowledge the Bohemian leaven of their nature, it is truly refreshing to find one man plucky enough to unbosom his inmost thoughts and divulge his varying moods. The glowing coal of an "office grate" is the familiar which has inspired these reveries; and to it we return our thanks.

No method marks the range of thought embodied in these essays, but the vagrant mind of the author has put up and unpacked at any chance hospitable whim. Although often prying into the outlying regions of the unknown, his are not the pert formulae of the metaphysical mountebank, who treads the tight-rope of our mental horizon and startles us by the audacity of his pranks; nor yet the imperious affirmations of the austere thinker; but the calm musings of an introspective mind,—the quaint thoughts of a Quaker philosopher, and, indeed, quite as quaintly costumed.

That the author has always reached his goal—the truth—cannot be affirmed; for, in studying the book of Nature,—that "*volumen operum Dei, et tanquam altera Scriptura,*" as

Bacon so happily calls it,—one is far from understanding all one reads. Some truths are prehensible and available; others hover at a distance, dim in outline; while many—too many, alas!—are lost in the haze of our ignorance, unseen and even unsuspected.

The chapters on "Success," "Spending," "Law," and "Principles," are ingenious and original. That on "Living" gives much sound advice. In "The Philosopher's Stone" the author cries "Eureka!" over the discovery of this life-truth, that "The common experience is the true experience." "Wise and Otherwise" is an olla-podrida of apothegms and erudite quotation. "To-Day," one of the best chapters in the book, shows up the vagaries of scientists. In it, by one of his pointed "Queries," he neatly spits the materialism of Maudsley, and proves that Cabanis has anticipated him by a century at least. Of all mental arms of precision, the Socratic method of argument is his favorite and most effective weapon; and yet he relies mainly on earnest persuasion and apposite illustration. "Utopia" describes the yearnings of an unsatisfied soul: can it be, O John Darby! that "*mutato nomine de te fabula narratur*"? "In the Country," a chapter sui generis for style and sentiment, brings to a close this series of essays. Thus it appears from this brief analysis that he deals not only with the practical questions of life, but also with those of vast outlook; questions which involve the very basis and essence of mind; questions on which we want light, more light, most light.

To those of our readers who find the time to dream day-dreams, we say, "Buy this book; for it will give you much pleasure as well as profit." To the author—whose *nom de guerre* cannot disguise from us a well-known surgeon of this city—we tender our hearty thanks for many charming hours spent over these genial and healthful essays.

ON SOME DISORDERS OF THE NERVOUS SYSTEM IN CHILDHOOD: being the Lumleian Lectures delivered at the Royal College of Physicians of London in March, 1871, by CHARLES WEST, M.D., Fellow and Senior Censor of the College; Physician to the Hospital for Sick Children. 12mo, pp. 128. Henry C. Lea, Philadelphia, 1871.

This little book contains three lectures, in which the author considers the subjects of neuralgia and epilepsy, chorea and paralysis, disorder and loss of power of speech, and mental and moral peculiarities and their derangements.

As these lectures were written for delivery before the Fellows of the College, they are not intended to be exhaustive monographs on each particular subject; but they fill up a hiatus, point out every-day errors in diagnosis, and enable those who do not see so much of children as Dr. West has seen to take advantage of the *little things*, the premonitory symptoms of the diseases of which he treats. The doctor has evidently in his heart a great love for his little patients, and this love has guided and intensified his powers of observation.

The first lecture is opened with a slight notice of Dr. Richard Caldwell and John, Lord Lumley, the founders of these Lectures in 1572. He mentions that from this chair William Harvey first publicly taught his doctrine of the circulation of the blood.

Dr. West defines neuralgia in the adult as "*pain independent of local disease,*" the cause of which may be known or unknown, but the disease consists simply of the symptom, pain, with perhaps an altered condition of the circulating fluid. He then states, and proceeds to prove his statement, that "*in infancy and childhood, however, pain referred to any part signifies, almost without exception, that disease of some sort or other is going on there or near at hand.*" When there is paroxysmal pain in the head, even if it seem to be controlled by quinia, he warns us to be prepared for organic disease of the brain. He, however, admits the existence of one form of true neuralgic headache developed in school-children, and which may exist in later years in the same individuals as hysterical sick-headache.

Without quoting too largely from the book, we can give no just idea of the author's teaching of the meaning of convulsions,—including those induced by intestinal disorders, and those which are the consequence of *advanced* organic disease of the nervous centres, but which are never, as he remarks, the initiatory symptoms.

He next shows the obscure beginnings of the epilepsy of children, and the difficulty of recognizing *le petit mal*, and argues that the greater proportion of cases of epilepsy in children originally depend upon eccentric causes which might have been removed. In his remarks on treatment, he considers bromide of potassium the most reliable curative agent. He states that he uses the remedy empirically, as it benefits some cases and has no effect upon others; and "he has found no means by which to distinguish beforehand the cases where the bromide will do permanent good." He makes no mention of the use of the ophthalmoscope to ascertain the condition of the retinal vessels, or whether the bromide was most efficient where there was habitual congestion.

In treating of chorea, the causes are first considered, and the effect of sex, rheumatic diathesis, etc., as predisposing influences. He includes the history of some interesting cases with heart-complications, and depends in his treatment mainly on the sulphate of zinc and tartar emetic.

The lecture on paralysis includes the forms following diphtheria, and those consequent on long illness, rickets, idiocy, cerebral tubercle; it includes also the characters of infantile paralysis.

The third and last lecture treats of speech, its tardy development in some cases, the causes of stammering, and the loss of speech after severe illness. He finishes the lecture with remarks on cases of mental and moral peculiarities of children, their effect on disease, and treatment.

In style the book is terse and clear, full of new ideas, and is a spur to new trains of thought. It will be a source of pleasure and profit to any physician whose practice brings him into contact with children.

ARTIFICIAL INDUCTION OF LABOR IN URÆMIA. By SAMUEL G. BUSEY, M.D., Physician to the Louise Home, one of the Physicians to the Children's Hospital, D.C., and Physician in Charge of Diseases of Children at the Columbian Dispensary. Read before the Clinico-Pathological Society of Washington, October 24, 1870. Reprinted from the *National Medical Journal*. Pamphlet, 8vo, pp. 62.

This very interesting paper has for its text the query, "Is the induction of premature labor as a remedy for and a method of prevention of uræmic eclampsia a practicable and a justifiable procedure?" It is an elaborate exposition of the views of the medical profession at the present time on the subject of eclampsia, its causes, consequences, and treatment.

The author, excluding such conditions as hysteria, considers the universal cause of eclamptic convulsions to be want of action of the kidneys, consequent on pressure, congestion, or other cause, the symptoms of the pathological condition of the kidney being albuminuria, anasarca, and convulsions; the latter the direct effect of either uræmia or anæmia.

To establish the truth of this theory, he quotes passages from many of our acknowledged authorities,—from Bright, who first directed attention to the relation between disease of the kidney and albuminuria, down to the latest publications bearing on the subject, including the histories of numerous cases, giving the subsequent experiences of recoveries and the results of post-mortem examination of those who died.

The greatest objection to this theory—the alleged ephemeral existence of the albuminuria of pregnancy—he meets by nine propositions. We quote the second of these: "In its incipient and primary stage, Bright's disease is self-limiting, terminating by resolution upon removal of the cause." This proposition serves also as a strong argument in favor of the proposed treatment,—the induction of premature labor; and he lays stress upon the fact that the proper treatment for the post-parturient condition is also proper for the disease of the kidneys,—viz., rest and light diet.

He proposes by an early removal of the cause—pregnancy—to stay the progress of the disease at a stage so early as to admit of resolution. As albuminuria occurs during the latter months of pregnancy, the operation does not necessarily destroy the fetus.

The author has carefully collected the record of deaths following the operation, and in successful cases has followed up the histories of the mothers. He compares the relative mortality, as regards parent and child, from eclampsia, forceps, version, craniotomy, and artificially-induced premature labor.

After proving the advisability of the induction of premature labor, he considers the various operations proposed for the accomplishment of that end. Of these he greatly prefers those of Dr. Barnes, which are "preparatory, provocative, and accelerative."

The paper is evidently the result of laborious research. It is convincing and cheering; for, if the deductions of the writer are correct,—and they are proved by figures,—many lives can be saved, as premature labor artificially induced is less dangerous to mother and child than chloroform or bleeding, while its results are more satisfactory.

THE ANTISEPTIC SYSTEM. A Treatise on Carbolic Acid and its Compounds. By ARTHUR ERNEST SANSOM, M.D., London. 8vo, pp. 356. Philadelphia, J. B. Lippincott & Co., 1871. (Reprint.)

With the exception of a single chapter, which treats of the sulpho-carbolates, the above substantial volume is devoted to the consideration of a single article. Simpson's huge tome on "Acupressure," and the numerous other massive contributions to the merits of a single process or system, are evidences of the tendency of the modern mind towards monography: general treatises are out of fashion.

Dr. Sansom finds material enough in the theme of "carbolic acid" to discourse learnedly through 347 pages octavo. It is true that the greater part of this space is given up to the discussion of the fungal theory of disease,—the pages treating of the immediate use of the acid being limited to 131. From this it would appear that the title "The Antiseptic System" placed on the back of the volume gives one an erroneous impression of the nature of the contents thereof.

The chapter on the theory of the subject having already been reviewed editorially in a previous number of this journal, we will confine our remarks to the practical part of the work.

Our author is evidently an enthusiast,—though his enthusiasm is tempered with judgment. Through an advanced interest early evinced in the subject he has become acquainted with its literature, and finally assumes towards it the honored position of historian. The book is, in a word, a running commentary on abstracts selected from an imposing list of authors, whose contributions—great and small—are here preserved. It is, therefore, apart from being a special plea for the virtues of carbolic acid, a bibliographical repository beyond whose copious references—since the preface bears a date so recent as "June, 1871"—the student need not care to search.

The following are some of the suggestive titles to chapters in that portion of the volume treating of the *uses* of the agent in question. Carbolic acid as a disinfectant; The external employment of carbolic acid; The treatment of wounds; The control and prevention of suppuration; Principles of the antiseptic system in the treatment of wounds; The antiseptic method in surgical practice.

Of these, beyond doubt, the most important are the chapters treating of the use of the acid in affections of the external surfaces inclusive of the respiratory tract.

The curious anæsthetic effects of the acid in common with a few other substances, among which may be mentioned the essential oil of peppermint, are mentioned, and credit given to Dr. Bill, U.S.A., who was among the first to direct attention to this property. He, it will be remembered, secured good results towards obtunding the sensibility of the integument over which a brush dipped in liquefied carbolic acid had been drawn. Upon the same indication the use of a lotion containing carbolic acid, one part to four of hot water, may be used with advantage in pruritus and lichen, as well as to meet indications for a parasiticide. As a counter-irritant efficient as well as of easy application, it is recommended from personal observation of the author. It is a disinfectant of undoubted power; its merits in this direction have long been recognized.

But these and other claims in its behalf are of minor importance when compared with the influence exerted by this curious article over the process of suppuration. It is in this department of its usefulness, so to speak, that the most brilliant results have been obtained. It is in great part to the labors of Lemaire and Lister that we are indebted for our knowledge of this subject, and Dr. Sansom gives *in extenso* the observa-

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tions and conclusions of these gentlemen. To Prof. Lister, more particularly, much space is given in detailing his method, now so famous, of treating wounds, and of conducting the after-treatment of surgical operations. The impression after perusal of this portion of the book is to the effect that carbolic acid is a most valuable and permanent addition to the practitioner's *materia chirurgica*. It should everywhere receive the earnest attention of hospital surgeons. We would here refer the reader to a recent number of the Cincinnati *Lancet and Observer* for an instructive account by Dr. Connor, in which is given Lister's latest method of conducting a surgical case under the carbolic-acid sprayer, carbolized gauze, etc. In glancing over the pages of this volume we have been pleased to find the recognition of American literary labor. Dr. Cleborne, U.S.N. (not U.S.A., as given on page 272), is spoken of as having contributed one of the earliest notes on the value of the acid in the treatment of boils and carbuncles (*Journal of the Med. Sci.*, 1869). Under the attempts towards an antiseptic result, mention might also have been made of the benzoated ligature of Dr. Mason Warren, of Boston,—which was used by him in his early operation of staphylopharyngitis.

The book presents that elegant appearance for which the publications of Lippincott & Co. are so justly noted. An *addendum* of nine plates, containing forty-two wood-cuts, is given,—most of the figures being derived from Beale, of whom Dr. Sansom expresses a profound admiration. Thirty-one formulæ are described. It would be an evidence of not a little ingenuity to devise a new mode of compounding this popular article.

HANDBOOK OF PRACTICAL OBSTETRICS, INCLUDING ANÆSTHETICS. By JOHN TANNER, M.D., M.A., LL.D. 18mo, pp. 237. Reprint by J. B. Lippincott & Co., Philadelphia, 1871.

This little book of 237 pages is intended to supply an existing need for a concise work on this subject for ready reference, and with a little more care it would have filled the place for which it was intended. In looking over it, we find some omissions and inaccuracies, and the meagreness with which some subjects are treated somewhat impairs the value of the book.

As the preface states, it is intended for students, so that "by its aid the student will be enabled to go to the bedside of the lying-in for the first time with perfect confidence in himself." If he depended entirely on this work, we are sure he would be at a loss in many cases, as it is almost too concise to answer the wants of the student. Notwithstanding its faults, it has some redeeming qualities, and one of the best of these is the copious and generally well-selected illustrations, which are unusually abundant for so small a work.

BOOKS AND PAMPHLETS RECEIVED.

Essentials of the Principles and Practice of Medicine. A Handbook for Students and Practitioners. By Henry Hartshorne, M.D., Professor of Hygiene in the University of Pennsylvania, etc. Third Edition, thoroughly Revised. 12mo, pp. xi., 487. Philadelphia, Henry C. Lea, 1871.

Medical Education in America: Being the Annual Address read before the Massachusetts Medical Society, June 7, 1871. By Henry J. Bigelow, M.D., Professor of Surgery in Harvard University. Pamphlet, pp. 83. Cambridge, Welch, Bigelow & Co., 1871.

On Sudden Death soon after Parturition. By Thomas More Madden, M.D., M.R.I.A., Dublin University. Reprinted from the *American Journal of Obstetrics*. Pamphlet, pp. 11.

A New Ovariectomy Clamp; also applicable for other Surgical Purposes. By B. F. Dawson, M.D., New York. Pamphlet, pp. 6.

The United States Patent Law. Instructions how to obtain Letters Patent for New Inventions. By Munn & Co., Solicitors of Patents. 18mo, pp. 119. Published at the Office of the *Scientific American*, New York, 1871.

GLEANINGS FROM OUR EXCHANGES.

ELECTRO-PUNCTURE OF THE HEART IN APPARENT DEATH FROM CHLOROFORM.—The means (*British Medical Journal*, September 16) at our disposal for the restoration of persons in whom life is endangered while they are under the influence of anæsthetics, are not so certain of success that we can afford to rest content with them. For this reason we here place before our readers an abstract of a very interesting paper on electro-puncture of the heart as a restorative measure in chloroform-syncope, published in the last number of Langenbeck's *Archiv für klinische Chirurgie*, by Dr. Steiner, of Vienna. It will be seen that the author of the paper does not assert that electro-puncture is an absolutely infallible remedy, but he produces sufficient evidence in favor of the innocuity, and at least occasional success, of the operation, to entitle it to consideration.

Dr. Steiner, after some preliminary remarks, quotes a number of cases from various authors to show that while in some instances punctured wounds of the heart, even by so small an instrument as a needle, have been followed by death, in others the injuries have been recovered from, the article by which the lesion was inflicted having been sometimes found in the wall of the heart after death from some independent disease, years after. To ascertain by direct experiment the effect of puncture of the heart, Dr. Steiner introduced needles into the hearts of various animals,—namely, horses, an ass, dogs, cats, and rabbits. The results of fourteen experiments of this kind have led Dr. Steiner to conclude that puncture of the ventricular wall with a needle is not attended with danger, provided that the instrument be at once removed. If allowed to remain, or moved to and fro, it may produce fatal inflammation or laceration of the muscular substance. Puncture of an auricle or of a coronary artery is followed by continuous and fatal hemorrhage; though there is just a possibility that the hemorrhage from the artery may be arrested by the formation of a plug. If the needle penetrate the endocardium, the contractions of the heart may in one or two minutes produce such an amount of laceration of the muscular fibre as to lead to rupture of the heart at this point. The careful temporary introduction of a needle into the substance of the heart is, then, not necessarily dangerous. Turning, next, to the subject of galvanism, Dr. Steiner observes that in two recorded cases of chloroform-poisoning attempts were made to excite the heart's action by the galvanic current. They were, however, both unsuccessful, the remedy not having been applied until all other usual means had failed. No conclusion, therefore, as to the effect of galvanism on the heart could be drawn from them.

The principal objections raised against electro-puncture of the heart are, first, that it may do harm by cauterizing it, and, secondly, that it may give rise to a dangerous development of gas. Dr. Steiner has found that these objections are without weight in regard to a weak interrupted current, which is all that should be used for the purpose of resuscitation. Even after passing a continuous current for a quarter of an hour into hearts filled with blood, there was only a slight extrication of gas by the electrolytic action of the battery. The caustic effect was practically *nil*.

In his experiments on animals narcotized by chloroform, Dr. Steiner found the most useful instrument to be a single-celled Smee's battery with an induction apparatus. The needle was introduced before the full effect of the chloroform was produced; and in this way the arrest of the heart's action was at once indicated by the cessation of the movements of the needle. Of the experiments performed, six were successful and ten unsuccessful. In seven other cases artificial respiration failed to restore the animals.

The conclusions at which Dr. Steiner has arrived from his experiments are the following. Electro-puncture of the heart is not dangerous. In cases of arrest of the heart's action by chloroform, even the immediate application of electro-puncture to the heart is not a certain means of resuscitation. The cause of this lies in the rapidity with which the heart loses its irritability after arrest of its action; and this occurs sooner under the influence of chloroform than in ordinary circumstances. The immediate application of galvanism to the

heart is to be preferred to artificial respiration in all cases where the cessation of the pulse at the wrist and the apparently fatal collapse indicate the total failure of the heart's action. The success which has in some cases attended artificial respiration is probably to be explained partly by the circumstance that the heart's action has not altogether ceased, and partly by the heart having been irritated during the progress of artificial respiration. In applying electro-puncture, the positive pole should be applied to the needle introduced into the heart, the negative at the scrobiculus cordis or over the seventh intercostal space on the left side. The current should be weak, and should be interrupted every few seconds. Galvanism of the heart applied in this way is not only relatively the most powerful means of rousing the action of the organ, but it also materially favors the inspiratory movements. The reappearance of movements in the needle or of those of respiration, and the return of the pulse at the wrist, are not sufficient indications for ceasing to apply the galvanic current: it must be continued until the heart beats rhythmically and vigorously. When commencing recovery, however, is indicated by the above-mentioned signs, artificial respiration may be employed at the same time with electro-puncture, so as to afford the heart the additional stimulus of a supply of oxidized blood. If no result follow the application of electro-puncture for a period of fifteen minutes, it may be concluded that the irritability of the heart is lost, and that all further attempts at resuscitation will be useless.

The cases, says Dr. Steiner, in which electro-puncture of the heart should be applied are those in which there is profound syncope with rapid collapse, the pulse immediately imperceptible, and the eyelids fallen.

OBSERVATIONS IN REGARD TO THE INFLUENCE OF ALCOHOL UPON THE TEMPERATURE OF THE BODY.—M. Rabow (*Berlin. Klin. Wochenschr.*, May 29) undertook, at the request of Prof. Leyden, a series of experiments to determine whether the ingestion of alcohol was followed by a lowering of the temperature of the body. The experiments appear to have been very carefully performed, the observations being made with the thermometer in the axilla or rectum, where it was allowed to remain from five to ten minutes. In all, twenty-five experiments were made. The results are different from those which have been obtained by American and English observers, for in twenty-three of the experiments an increase of the temperature was noted, and in two of them there was no change, but in no case was diminution observed.

AN INSTRUMENT TO FACILITATE POST-MORTEM EXAMINATION OF THE HEAD.—Mr. Jessop describes in the *British Medical Journal* for September 1 an instrument which he has devised for this purpose. "The instrument," he says, "consists of a solid base of brass, with two thumb-screws, by means of which it can be firmly fastened to the post-mortem table or coffin-board. Attached to the base by two strong hinges is a radial slide, also of brass, in which is fitted a steel spring or clip for holding the head, capable of being moved to either extremity of the slide, and of being held fast at any point by means of two thumb-screws. The blades of the clip are made to secure the head, as in a vice, by means of a leather strap passed through their extremities over the forehead. The backward and forward movements of the radial slide are limited by a quadrant with thumb-screw, and enable it to be set at varying angles with the base. The instrument is also fitted with clips of different sizes and of lighter make, covered with leather, for use in the operating-theatre in cases where the head is required to be held steadily and in which chloroform is inadmissible or otherwise unnecessary."

ULCERATION OF THE CAROTID ARTERY.—Dr. Charles Phelps (*Medical World*, August, 1871, p. 45) ligated the carotid artery below the omo-hyoid muscle under the following circumstances: A man, aged 32, while laboring under an attack of *mania a potu*, drew a razor across the neck, making a wound which extended from the larynx upwards and backwards through the right submaxillary space for an extent of four inches. Upon the twelfth day the wound had united through its whole extent, except at the inner extremity. A slight hemorrhage occurred through this opening on the morning of the same day.

At half-past four o'clock a profuse hemorrhage occurred, necessitating immediate ligation of the carotid. The patient died twenty-four hours thereafter. Upon autopsy, a perforation half an inch long by three-eighths of an inch wide was found in the artery at and below its point of bifurcation.

OBLITERATION OF THE ASCENDING CAVA AT ITS ORIGIN.—M. Jobert reports (*Gazette Hebdomadaire*, August 4) a case in which he diagnosed a complete occlusion of the vena cava ascendens. The patient did not give a very good history of his case, but it appears that about five years before coming under observation he had had an attack of phlegmasia alba dolens of the left leg, probably in consequence of excessive fatigue. At this time he was confined to his bed during a month, and, although afterwards able to work as a cowherd, his left leg was almost constantly oedematous, and his right would become so after prolonged walking or standing. Upon examination, the superficial veins of the two lower limbs, but especially of the left, were moderately dilated. The abdominal parietes were not oedematous, but presented an enormous development of the cutaneous veins, which extended from the hypogastric region to the level of the axillae.

The patient presented some peculiar gastric symptoms, the most marked of which was boulimia, to appease which he consumed the rations of five soldiers, and he said that he could eat still more. The thirst was not excessive, and the urine was found to be normal. It was thought that the boulimia might be caused by the presence of a tapeworm; but, as none was passed after the administration of kooosso, which was given as an anthelmintic, this opinion was abandoned.

PROF. SAYRE'S VERTEBRATED PROBE AND CATHETER.—In the *British Medical Journal* for July 22, 1871, Prof. Sayre, of New York, describes the vertebrated probe and catheter which he has devised, as follows:

"It consists simply of a series of hollow silver disks, made a trifle smaller at one end than at the other, so as to fit into one another, like a pile of cups or tumblers. These are held together by a linked chain running through the series and jointed nearly opposite each disk-insertion. The chain terminates in a square rod which runs through the last disk and is much larger than any of the others; and on the end of the small rod is cut a thread, on which runs a small button-screw, which can make the chain tight or loose at pleasure. Of course, when the screw is turned back, the chain being lengthened, the disks fall away from one another, and the probe is as limber as a chain, capable of following any sinuosity into which it may be pushed; and by a few turns of the screw, the chain being shortened, the disks are drawn firmly together, so as to make a solid probe, which will give the concussion against carious or necrosed bone, the same as any other probe. A small slot is made in the canula containing the screw, for the purpose of putting a small nut which regulates the tension of the chain and thus prevents the possibility of applying any sufficient force to break it. There are two fenestrae at the distal disk, for the purpose of drawing an oakum seton through deep sinuses and carious joints; this makes it also very useful as a catheter in cases of tortuous urethra from enlarged prostate. It is impossible to make a false passage with it, and, as it is simply a series of ball-and-socket or universal joints, it will follow any passage, however devious. By simply unscrewing the steel bulb at the end, and inserting a bulb of porcelain, according to the suggestion of Nélaton, you have the most perfect bullet-probe that can be desired.

"To clean it, it is necessary to unscrew it at the end, and to remove the small screw at the slot in the canula, when it will immediately fall to pieces. After washing, it is easily put together, just the same as a string of beads, only remembering to put the small end at the disk on the wire first; and, as each disk increases in length until the end, of course no error can occur in making them fit properly."

The description is illustrated by two wood-cuts.

IMMUNITY OF ANIMALS OF CERTAIN COLORS FROM POISON.—Prof. Wyman (*Boston Med. and Surg. Jour.*, August 17, 1871, p. 107) records some observations on the immunity of animals of certain colors from the action of poison. In Florida, on the upper St. John River, he found that all the hogs were black, the reason being that a species of flag on which hogs

feed in that country caused in white ones a disease in the hoof, from which this appendage gradually loosened and fell off without any ulcerative process, and was not redeveloped, and the animal became useless. In black ones, however, this does not occur. In hogs of mixed color, if any considerable portion of the body is white they are poisoned. In connection with these curious facts, he mentioned that the Jamestown weed, as is well known, produces an eruption around the nostrils of white horses.

[In an article on Anosmia, contributed to the last volume of the Transactions of the Medico-Chirurgical Society of London, Dr. W. Ogle attributes this immunity of dark-colored animals to the fact that the olfactory organ is more liberally supplied with pigment in these than in light-colored animals. This pigment is as essential, he thinks, to the sense of smell, as is that of the choroid membrane to the vision; and, consequently, animals in whom it is absent are unable to recognize poisonous plants.—EDS.]

ON SESQUICHLORIDE OF IRON AS A PROPHYLACTIC OF ACUTE RHEUMATISM.—Dr. Anstie (*Practitioner*, September) has treated six cases of acute rheumatism with the tincture of the sesquichloride of iron, and in four of these he thinks the results distinctly bore out the main assertions of Dr. Russell Reynolds, by whom this remedy was originally recommended in the treatment of this disease. He has also found the sesquichloride useful as a prophylactic. "Whenever," he says, "a patient has presented himself with articular pain and slight fever that were plainly of the rheumatic and not of the gouty type, he has been at once placed on thirty- or forty-minim doses of the tincture of sesquichloride, from three to six of which, according to the severity of the symptoms, have been given in each twenty-four hours. I have several times called the attention of the students to the fact that (unlike what used to happen) these cases now reappear in my outpatient room on my next hospital day, and, in the great majority of instances, declare themselves greatly relieved."

GASTRIC JUICE IN THE TREATMENT OF CANCER.—Dr. D'Arpém (*L'Union Médicale*, September 2, 1871, from *L'Imparziale*) gives the particulars of a case of ulcerated cancer of the rectum treated by injections of artificial gastric juice. After the employment of other remedies which had proved inefficacious, twenty-five grammes of gastric juice, obtained from Prof. Schiff, and made into an emulsion with glycerine, were administered by injection. The immediate effect of this was to produce intense pain in the rectum, palpitations of the heart, and vesical tenesmus. An hour after, the patient passed blood, partly liquid and partly in clots, together with a gelatiniform débris, which had a very repulsive odor. The next day the remedy was repeated, but was followed by the injection of sweet oil to mitigate the pain arising from it. The same effects were produced, except that the suffering was less severe. The injections were administered three times daily during twenty days, at the end of which she considered herself well, but, at the recommendation of Dr. D'Arpém, she continued their use for eight days longer. Having at that time ceased to pass any débris of the tumor, she afterwards used only injections of sweet oil. After a long absence she again presented herself to Dr. D'Arpém, who says that the cure at that time was complete.

BIZZZERO ON THE DEVELOPMENT OF BLOOD-CORPUSCLES IN THE MEDULLA OF BONES.—In No. 10 of the *Medical Times*, March 1, 1871, we introduced from the *Quarterly Journal of Microscopical Science* for January, 1871, some researches of Neumann on the Development of Blood-Corpuscles.* From the same journal, issue of July 1, we publish some additional observations originally contributed by Bizzzero to *Virchow's Archives*, vol. lli. p. 156, who distinguishes three kinds of osseous medulla,—the red, the yellow, and the gelatinous. The red occupies the most important position with respect to the formation of blood. It consists of three varieties of cells:

1. Cells analogous to the white corpuscles of the blood, .005 mm. to .010 mm. in diameter, sometimes without a nucleus, sometimes containing a divided nucleus or even two nuclei. Their contractility is very remarkable, and was observed by Bizzzero so long ago as 1865. He has also directly observed in four frogs multiplication of these cells by division; the actively-moving cell drew itself out, became constricted in the middle, and finally separated into two parts. The obvious objection that such cells might be migrated blood-cells was met by the experiment of carefully washing out with solution of common salt the vessels of rabbits recently killed by bleeding, before examination of the medulla. The number of bodies resembling leucocytes was not in any degree diminished. It was also observed that the number of cells contained in the medulla was very far out of proportion to any that could be contained within the vessels.

2. Red nucleated cells, discovered by Neumann. These vary from .008 mm. to .012 mm., or more, in diameter. They show every transitional form, from the colorless nucleated cells to the red blood-disks; some showing a large nucleus and colorless protoplasm, others one or more small nuclei and a protoplasmic mass of the same color as the red blood-disks. The vanishing of the nucleus takes place by a kind of atrophy, the nucleus breaking up into granules. Elongated cells with two nuclei—one at each end—were also observed. They are either spindle-shaped or narrow in the middle, and show the process of division of red cells.

3. "Gigantic" or myeloid cells, with proliferating central nucleus, were observed. Their size is .025 mm. to .045 mm. They have an irregular round, oval, or kidney shape. They differ from the *myeloplaxes* of Robin in shape, size, and consistence, as well as in their locality.

4. White cells containing red globules were first discovered by Bizzzero himself in 1868, and are commonly, though not constantly, present. The shape of these is extremely various;—in animals, mostly round or oval; in man, more often angular or spindle-shaped. Their size is .01 mm. to .05 mm. The protoplasm is colorless or slightly yellowish, but contains red globules and pigment-granules. The number of red globules is from one to eight, or, in pathological conditions, even as many as thirty or fifty. Pigment-granules occur with or without the blood-disks, and are sometimes three or four times as large. These cells Bizzzero declares to be concerned in the destruction of blood-disks, and he compares them to the similar forms described by Kölliker in the spleen.

The blood-vessels are described by Bizzzero and Neumann as extremely abundant in the red medulla, composing more than half its substance. Bizzzero has also observed *capillaries*, which Neumann failed to find, and has both isolated them and demonstrated their longitudinal spindle-cells by injections.

The arteries and veins form a kind of framework, in the interstices of which are contained the proper elements of the medulla. While Neumann finds the red blood-cells always within the vessels, Bizzzero observed his cells containing red blood-globules outside the vessels. The medullary cells are scattered in quite a disorderly manner in the meshes of the vascular network; the gigantic cells occur at intervals, separated by more or less considerable masses of medullary cells. The connective-tissue cells, with their prolongations, form a sort of network, which is demonstrated very clearly on teasing out sections of the medulla hardened in potassium bichromate, or, better, in osmic acid.

The gelatinous medulla differs from the red by its abundant intercellular substance. While in the red medulla the spaces between the vessels are almost filled with cellular elements, there is in the gelatinous a large quantity of amorphous, translucent, colorless, or faint yellowish substance, which coagulates with dilute acetic acid and dissolves in an excess of that reagent. Moreover, the nucleated blood-cells, and especially the cells containing blood-globules or pigment, are rare.

The yellow medulla is distinguished from both the others by its richness in fat-cells. Various transitional forms between these three varieties may be met with. These facts and their pathological variations illustrate the great analogy of the medulla with the spleen.

* See, also, in No. 20, July 15, of this journal, a case of *Leukamia*, with slight splenic enlargement and hyperplastic growth of the medulla of the bones, from *Virchow's Archives*, March, 1871, bearing upon the same interesting subject.

Four experiments were made to determine the effect of starvation on the medulla. In a healthy, well-fed rabbit the leg was amputated, and the medulla of the tibia found to be of a gray color below and grayish-red in the upper part, while the microscope revealed a large number of fat-cells. In starved rabbits the corresponding structure was found to be of a dark-red color and highly vascular. The microscope showed enormous dilatation of the vessels, the veins in some parts touching one another and leaving hardly any space for the proper medullary tissue. Where there was any interval, it was found occupied by amorphous matter, or else by nothing but medullary cells.

THE PHOSPHORESCENCE OF FISHES.—M. Panzeri, as the result of some investigations (*Gaz. Méd.*, Sept. 9, 1871), states it as his belief that the phosphorescence of certain fishes is a property possessed by the fat in their bodies. He presented to the Society of Naturalists of Italy a specimen of the *Trachyterus iris*, which in the daytime resembles a ribbon of silver, but at night has the appearance of a sword of fire. A single fish will produce enough light in a room to enable observers to recognize one another.

MISCELLANY.

THE WEATHER DURING SEPTEMBER.—The record of the weather kept at the Pennsylvania Hospital exhibits the following facts in reference to the temperature during the month of September. The mean temperature was 63.88 degrees, nearly seven degrees less than that of September, 1870, and about three degrees less than the average temperature of the month for the past eighty years. The highest point reached by the thermometer was on the 6th ultimo, when it marked 80.5 degrees, and the lowest on the 21st ultimo, when it descended to 43 degrees, presenting a range of 37.5 degrees. The highest marking of the thermometer in September, 1870, was 86 degrees, and the lowest 54 degrees. The fall of rain during the past month was 1.77 inches, while that of the month of September, 1870, was 1.71 inches. In September, 1869, it was 3.25 inches, and in 1868, 8.90 inches.

AN UNFORTUNATE CASE OF POISONING has recently occurred in the lower part of the city. The evidence at the coroner's inquest was somewhat contradictory, but it appears that the wife of the deceased asked for black draught, and received instead from the apothecary a preparation of opium. The apothecary, who is also a practitioner of medicine, asserts that he explained to the woman the nature of the remedy sold, and the way to use it, telling her that it was better suited to relieve the neuralgic affection from which her husband was suffering than the infusion of senna and salts, which is very likely to have been the case. Moreover, the preparation sold was not black drop,—which, it will be remembered, was once dispensed in this city for black draught, thereby causing the death of a woman who had only recently arrived in this country from England, where the latter is a very popular remedy,—but wine of opium diluted. The dose, however, appears to have been large, and it was administered every hour, instead of every three hours, as prescribed. No treatment directed towards the removal of the opium from the stomach of the unfortunate man, or towards counteracting its effects, seems to have been employed.

Popular names for medicines are very frequently quite local, and it is surprising how many American druggists are ignorant of the composition of black draught. Prof. Bridges, of the

School of Pharmacy, tells us that he has recently heard of a man searching in vain throughout the city for the extract of liquorice under the name of Spanish juice.

ST. THOMAS' HOSPITAL.—A correspondent of the *Medical Times and Gazette* calls attention to some blunders which he conceives to have been made in the erection and fitting-up of the new hospital. A large sum of money has been spent upon the exterior of the building, upon the treasurer's residence, and upon a banqueting-hall, while the wards are furnished in the scantiest manner. The resident physician's accommodations are insufficient and at an inconvenient distance from the wards. The out-patients, after having been prescribed for, have to walk half the length of the building, without protection from the weather, to procure their medicines. The writer says, "We had heard rumors that all was not perfectly satisfactory in the new establishment, and that suggestions from those who might be supposed to know best had been consistently set on one side; but we were hardly prepared for the series of blunders we encountered."

FAILURE OF CONDURANGO.—The following, from the *British Medical Journal* for September 9, 1871, accords with the expectations of most thinking physicians on this subject:

"All that we hear of the results of the trials given to the Condurango bark furnished by our Government to the Middlesex and St. Bartholomew's Hospital, through the College of Physicians, confirms the fear that any hope which might have been entertained of a confirmation of the statement of its utility as a remedy in cancer must be entirely dismissed. Physiologically it appears to be practically inert, and its therapeutic effects in the treatment of cancer to be *nil*. It furnishes a slightly bitter extract of feeble characters. A detailed therapeutic report will be made by Mr. Hulke, and a careful examination of its physiological action by Dr. Brunton, but this mainly in deference rather to the official sources from which this small supply has been furnished, and to set at rest the excitement caused by the somewhat scandalous claims which have been set up in its favor."

CARBOLIC ACID IN SNAKE-BITE.—Dr. S. Weir Mitchell (*British Medical Journal*, July 15, 1871), from observations on the bite of the rattlesnake, and MM. Greguian and Vioud Grand-Maraîs (*Jour. de Méd. de l'Ouest*, and *Bull. Génér. de Thér.*, March 30, 1871), from observations on that of the viper, have arrived at the conclusion that the application of carbolic acid immediately on the receipt of the injury prevents both local and general poisoning. The pure acid, however, if applied in too great a quantity, is liable to produce sloughing, and even dangerous symptoms: hence it is best used in the proportion of two parts of acid and one of alcohol. Given internally, or applied to the wound at a late period, it has no effect. It is believed to act, not by neutralizing the poison, but by causing contraction of the small vessels and thus preventing its absorption.

Apropos of the above, Dr. E. A. Grove, of Carlisle, Pa., writes to us describing a case of copperhead-snake-bite and its treatment. A laborer on the railroad, aged 20, was bitten, while at work, on the palmar surface of the second phalanx of his index-finger. He immediately tied a cord around the finger as tightly as possible, with the view of preventing the absorption of the poison. When the doctor saw it, the finger was much swollen and very dark in color, while the arm was also considerably swollen. The cord, which completely obstructed the circulation, was promptly removed, the wound was freely incised, and carbolic acid applied with the view of coagulating the albumen and causing contraction of the capil-

laries,—thus to prevent the absorption of the venom. The part was then dressed with a solution of muriate of ammonia, —3ss to the pint of water. Whiskey and aromatic spirits of ammonia were administered internally.

In a few days sloughing set in, and the doctor was compelled to disarticulate the second phalanx from the third, when the patient promptly recovered. The use of the ligature in this instance makes it impossible to draw any conclusion. It is likely that it was alone sufficient to produce the sloughing which unfortunately complicates the case.

ALLEGED CURE FOR SNAKE-BITE.—Dr. Hill reports in the *New South Wales Medical Gazette* a case in which a woman bitten on the forearm by a large black snake was treated by ammonia and brandy, while the bitten part was promptly excised. After a time drowsiness and vomiting set in, and the patient recovered. The value of this case in determining the efficiency of the mode of treatment adopted must remain uncertain to North Americans. For although the term black snake is a very general one, in this country it is applied to a species of snake well known to be harmless in its bite. By these remarks, however, we do not wish to be considered as disparaging the value of the ammonia treatment as determined by better evidence; and we are very glad to learn by the *Medical Times and Gazette* for July 15, 1871, that Prof. Halford, of Melbourne, has been presented with a testimonial as a recognition of the merits of his method of treating cases of snake-bite by the injection of ammonia. The testimonial consisted of a handsomely-bound book and a purse containing one hundred and twenty sovereigns. In making his acknowledgment, Prof. Halford gave an interesting explanation of the circumstances which led to the discovery, and expressed his belief that this mode of treatment was capable of extension to constitutional diseases. An influential committee was also appointed by those present to wait upon the Government in order to ask that a sum of money might be placed in Prof. Halford's hands to enable him to make experiments in this direction.

A NEW WAY TO ADMINISTER REMEDIES.—Prof. Almen, of Upsal, recommends gelatine as a vehicle for the administration of remedies. Six grammes of gelatine are dissolved in hot water, and the medicine then added to the solution, which is then thrown upon a glass surface and allowed to evaporate. Insoluble medicines must be mixed with a thick emulsion of gum arabic before being added to the solution of gelatine. We see by the journals that medicines are prepared in the above way in Cincinnati.

A small quantity of glycerine added to the mixture will render the preparation less friable, and as flexible as paper. The mass is afterwards to be divided into squares, each representing a fixed dose of the incorporated medicine. In this way the acetate of morphia, tartar emetic, sulphate of copper, the extracts of opium and of belladonna, the powder of ipecacuanha, of digitalis, and of camphor, have been administered.

NEW MEDICAL SCHOLARSHIPS.—We learn from the *Medical Times and Gazette* of July 22 that a portion of the share of students' fees recently relinquished by the governors of St. Mary's Hospital, London, for the benefit of the Medical School, have been devoted to the foundation of three scholarships in natural science, each of the annual value of £40 and tenable for three years. The first of these, and also an exhibi-

tion in natural science of the value of £20, will be awarded in September next, by open competitive examination.

A RELIC OF BARBARISM.—The above is the appropriate title for a recent action of an English court of assizes sitting under Mr. Justice Lush. Rachel Busby, indicted for the wilful murder of her child by drowning it in a pool near the cottage in which she lived, pleaded guilty, and was sentenced to death. Having stated in answer to a question that she was *enceinte*, a jury of matrons were empanelled and confirmed her statement. She was then removed to the county jail, and has since been respited. It is justly remarked by the editor of the *Medical Times and Gazette* that it may have been very well in dark and mediæval times to take a jury of matrons in consultation on this point, but that in the present advanced state of medical knowledge it is an amazing anomaly to have recourse to such a means of arriving at a diagnosis in a matter on which the surgeon of the jail could have given much more reliable information. The former method, however, seems to be still the legal one of settling this question.

TOBACCO AND ALCOHOL.—The following extract from a chapter on "The Medical Aspect of Tobacco-Smoking," contributed by Dr. E. B. Gray to the September number of the *Food Journal*, is taken from the *Medical Times and Gazette* for September 16:

"Tobacco should be used as supplementary to food, not as a substitute for it. The season, therefore, for healthy smoking is after a meal. Tobacco should not be taken on an empty stomach (unless to stave off hunger) any more than alcohol. Smoking merely to kill time or to color a pipe is a childish abuse of tobacco. Against moderate smoking in a healthy person who enjoys it, not a single argument of any weight has yet been advanced. Perhaps the most plausible of them is this: that every smoker daily imbibes a small quantity of tobacco-oil and nicotine; and as these substances taken by themselves in the pure concentrated state and in large doses are highly poisonous, therefore every smoker is daily poisoning himself. Just as reasonable is it to condemn all alcoholic drinks, such as wine, beer, etc., as pernicious, because a draught of pure alcohol will nearly or quite kill a man; or to condemn tea and coffee as dangerous drinks, because their active principles, theine and caffeine, taken alone or in large doses are poisons.

"One of the best-established truths in medical science is that the same physiological agent, according to the dose given, may produce effects which differ not only in degree but in kind. The idea of tobacco or other such agent slowly accumulating in the system and at length producing the effect of a single large dose, is *a priori* absurd, and also contradicted by experience.

"So much, and often so much nonsense, is prated about the evils of tobacco, that its virtues rarely get a hearing; and yet the latter are many and great. To quell nervous unrest, to soothe a ruffled temper, to favor calm and impartial thought, to steady and clear (not to cloud) a confused overworked brain, to counteract the effects of physical exhaustion,—these are just the things that tobacco does; and if it can effect these things safely and pleasantly, who shall deny it a place among God's good gifts to man?"

This is certainly most comfortable doctrine for the habitual smoker,—much more so, certainly, than that to be found in the report of M. Jolly to the Académie de Médecine on L'Absinthe et le Tabac (*Bulletin de l'Académie*, August 31, 1871). This gentleman takes a very different view of the effects of tobacco, even in moderate quantities, upon the human system, and is disposed to attribute many of the evils under which Paris is now suffering to the demoralization of the Parisians produced by the excessive use of tobacco and alcohol. "It must be confessed," he says, "that more of our

soldiers have fallen into the power of the enemy intoxicated with alcohol or nicotin than in consequence of wounds, and that even in the days when the national destiny was confided to the militia it was not rare to see armed civilians staggering in the streets, or even whole battalions marching to the field like a herd of drunkards and throwing themselves blindly into the midst of their enemies."

The writer alludes to the greater mortality after wounds among habitual drunkards than among the sober, and also to the great increase in the number of the insane and of the sufferers from various nervous affections since tobacco has come into general use.

NOTES ON THE HISTORY OF OVIARTOMY, BY DR. NATTA-SOLERI VINCENTO.—The *Edinburgh Medical Journal* for July, 1871, extracts from the *Gazette Médicale de Paris*, No. 124, 1870, the following notes on the history of ovariectomy:

"In 1752 the idea of ovariectomy entered the mind of an illustrious Italian, Jean Targioni Tozzetti, of Tuscany, after seeing a case in which the ovary had been successfully removed from a young girl by a man quite ignorant of surgery.

"Morgagni next, having made the distinction between simple or unilocular cysts and multilocular ones, stated that the first might be removed in cases where adhesions did not exist. It was a great step towards the admission of this operation to state, in 1761, the indications which should contraindicate its performance. Time and experience could do the rest.

"Later, Monteggia, fearing the results of the operation which might follow extensive incisions, advised early operation, before the cyst had attained a large size or contracted adhesions. At length, in 1815, a modest surgeon, Emiliani Gaetano, of Faenza, a man full of wisdom and daring, attempted the operation on a young woman, aged twenty-six. An otherwise good state of health encouraged the attempt, and the patient consented. He made an incision, eight inches in length, in the linea alba, through the whole thickness of the abdominal wall, down to the peritoneum, which he divided cautiously. The left ovary, much enlarged, then presented itself, and he recognized it adherent to the lower part of the colon. The adhesions being overcome, the tumor was got out of the belly, was removed, the vessels being tied as they were divided, after which the edges of the wound were united by suture and covered by charpie and a gentle retentive bandage. The case recovered; and thus it is not Hizers [Sizars] of Edinburgh who must be considered the first to practise ovariectomy scientifically in Europe, as he did not operate till 1825, or ten years after Dr. Emiliani of Faenza. Ovariectomy was introduced into Europe in 1815* through Italy, as can be verified by consulting the *Bulletino delle Scienze Mediche di Bologna*, where a detailed account of this operation will be found, which deserves a place among the first in the annals of surgery."

MR. GROTE'S BRAIN.—The examination by Mr. Marshall of the eminent historian's head has revealed the fact that the brain was remarkably small. It is said, however, to have been unusually rich in convolutions.

APPOINTMENTS.—Dr. Erskine Mason, formerly Demonstrator of Anatomy in the College of Physicians and Surgeons, New York, has been appointed Adjunct Professor of Surgery in University Medical College in the same city.

Dr. Silver, the Senior Assistant Physician at the Charing Cross Hospital, London, becomes full Physician, succeeding the lamented late Dr. Hyde Salter.

HOSPITAL IMPROVEMENTS.—We learn from the *New York Medical Record* that the new amphitheatre of the Bellevue Hospital is now completed, and was formally opened by the Medical Board of the Hospital on September 15. The lec-

ture-room is capable of seating eight hundred students, and is said to be the largest and most complete in the country, if not in the world. The ventilation is excellent, and the light is reflected from the rotunda.

SCARLATINA UNKNOWN IN INDIA.—The editor of the *Indian Medical Gazette*, June 1, 1871, asserts that scarlatina is unknown in India, and is satisfied that a case reported as such by Dr. Maunsell was not a genuine case of the disease.

MORTALITY OF PHILADELPHIA.—The following reports are condensed from the records at the Health Office:

	For the week ending	
	Sept. 30.	Oct. 7.
Consumption	43	35
Other Diseases of Respiratory Organs	25	27
Diseases of Organs of Circulation	17	10
Diseases of Brain and Nervous System	37	35
Diseases of the Digestive Organs	21	19
Diseases of the Genito-Urinary Organs	2	3
Zymotic Diseases	25	40
Cancer	10	6
Debility	30	28
Intemperance	1	1
Casualties	9	8
Old Age	14	10
Stillborn	18	20
Suicide	2	3
Syphilis	1	1
Hydrophobia	0	1
Scrofula	0	1
Unclassifiable	13	12
Unknown	1	2
Totals	269	262
Adults	142	131
Minors	127	131

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM SEPTEMBER 19, 1871, TO OCTOBER 4, 1871, INCLUSIVE.

- HEAD, J. F., SURGEON AND MEDICAL DIRECTOR.—By S. O. 212, Department of Dakota, September 16, 1871, granted leave of absence for twenty days.
- HEGER, A., SURGEON.—By S. O. 212, Department of Dakota, c. s., to perform duties of Medical Director during temporary absence of Surgeon Head.
- CLERMENTS, B. A., SURGEON.—By S. O. 59, Military Division of the South, September 27, 1871, leave of absence extended fifteen days.
- McKEE, J. C., SURGEON.—By S. O. 205, Department of the East, September 27, 1871, granted leave of absence for twenty days.
- McCLELLAN, ELY, ASSISTANT-SURGEON.—By S. O. 383, War Department, A. G. O., September 30, 1871, granted leave of absence for thirty days, with permission to apply for an extension of sixty days.
- MIDDLETON, P., ASSISTANT-SURGEON.—By S. O. 196, Department of the South, September 16, 1871, assigned to duty at Frankfort, Ky.
- TREMAINE, W. S., ASSISTANT-SURGEON.—By S. O. 167, Department of the Missouri, September 18, 1871, granted leave of absence for thirty days.
- MONROE, F. LE B., ASSISTANT-SURGEON.—By S. O. 166, Department of the Platte, September 22, 1871, assigned to temporary duty at Fort Laramie, Wy. T.
- GIRARD, J. B., ASSISTANT-SURGEON.—By S. O. 370, War Department, A. G. O., September 21, 1871, leave of absence extended sixty days.
- LAUDERDALE, J. V., ASSISTANT-SURGEON.—By S. O. 368, War Department, A. G. O., September 20, 1871, relieved from duty in Department of Arizona, and to proceed to New York City.
- KIMBALL, J. P., ASSISTANT-SURGEON.—By S. O. 210, Department of Dakota, Sept. 14, 1871, leave of absence granted for thirty days, with permission to apply for an extension of sixty days.
- FITZGERALD, J. A., ASSISTANT-SURGEON.—By S. O. 170, Department of the Missouri, September 22, 1871, assigned to temporary duty at Fort Harker, Kansas.
- COWDREY, S. G., ASSISTANT-SURGEON.—By S. O. 170, c. s., Department of the Missouri, to accompany 6th Infantry to Camp Supply, Indian Territory, and, on arrival, report to commanding officer for assignment to duty.
- CHERBONNIER, A. V., MEDICAL-STOREKEEPER.—By S. O. 364, War Department, A. G. O., September 18, 1871, assigned to charge of Medical Purveying Depot at San Antonio, Texas.

* From America, the first operation having been performed by Dr. Ephraim McDowell, of Kentucky, in 1809.—Ed.